

JOINT USERS RESOURCE ALLOCATION PLANNING (JURAP) MEETING

March 15, 2001





April 04, 2001

Refer to: 930-01-05-ESB:lc

TO: Distribution

FROM: Eugene S. Burke

SUBJECT: Minutes for the Joint Users Resource Allocation Planning Committee Meeting held March 15, 2000.

NEXT JURAP MEETING:
Thursday, April 19, 2001
JPL Bldg. 303, Room 209 B 1:00 p.m.

We have instituted a simple Teleconference capability for non-JPL numbers.
Please contact D. Morris if you wish to participate.

Attendees:

B. Arroyo	J. Hall	K. Kim	R. Ryan
R. Bartoo	J. Hodder	N. Lacey	M. Slade
G. Brower	D. Holmes	R. Mase	J. Valencia
E. Burke	R. Hungerford	M. Medina	I. Webb
B. Compton	J. Kehrbaum	J. Miller	
D. Doody	P. Khoury	D. Morris	

The Joint Users Resource Allocation Planning Committee meets monthly to review the status of Flight Projects and the requirements of other resource users, to identify future requirements and outstanding conflicts. The last regular meeting was held on March 15, 2001 at the Jet Propulsion Laboratory.

Introductory Remarks - E. Burke

The MAP launch is planned for June, GOES launch is planned for mid-July, and Genesis launch is planned for late July. In addition, a special report will be presented on the 2001 Mars Odyssey spacecraft, scheduled to launch on Saturday, April 7. Cluster project representatives may visit JPL to discuss the Cluster mission objectives at the April JURAP meeting.

Special Report: 2001 Mars Odyssey Mission – R. Mase (for D. Spencer)

Mars Odyssey (MO10) launch date is planned for April 7, 2001, with arrival at Mars planned for October 24, 2001. The three major on-board science instruments are the Gamma-Ray Spectrometer (GRS), the Martian Radiation Environment Experiment (MARIE), and the Thermal Emission Imaging System (THEMIS). The science objectives are, in part; to globally map the elemental composition of the surface, to determine the abundance of hydrogen in the shallow subsurface, and to acquire high spatial and spectral resolution images of the surface mineralogy.

DSN Operations – J. Hodder

The DSN Operations performance is nominal. See statistics in presentation material.

Resource Analysis Team - K. Kim for F. Leppa

The mission set has been updated to include Cluster, and the Mars missions. The antenna resource database has been updated to include DSS 55. DSS 25 Ka-band uplink availability date is to be determined.

DSS Downtime Forecast – J. Valencia

The installation of the 20 kW X-band transmitter at the beam waveguide (BWG) antennas has been scheduled on a non-interference basis (NIB) to the existing Network Simplification Plan (NSP) in 2002 and 2003.

The requested downtimes for the DSS 14 Antenna Controller Replacement task have been scheduled as a proposal. A formal contention and recommendation plan will be submitted for consideration at the next scheduled RARB meeting.

Proposals for DSS 43 and DSS 63 Antenna Controller Replacement task are being worked and time frames in 2005 are being considered.

Goldstone Solar System Radar - M. Slade

The observations of Near-Earth Asteroids 1950 DA and 2000 PN9, conducted in early March, were all successful. Both of these asteroids (2000 PN9 and 1950 DA) are potentially hazardous and determination of their orbits with high accuracy is very important. The Goldstone/ Arecibo radar interferometric observations of Venus, conducted in February, were successful.

Radio Astronomy / Special Activities - G. Martinez

No report

FLIGHT PROJECT REPORTS:***Chandra - G. Wright***

No report

Near Earth Asteroid Rendezvous (NEAR) - J. Miller

The spacecraft successfully landed on the asteroid EROS on February 12th. Unexpected favorable conditions allowed instrument operations on the surface of the asteroid, which prompted extended DSN support. Data was successfully returned from the gamma ray spectrometer and magnetometer

instruments. The spacecraft was reconfigured for hibernation on the final track that ended at 0000Z on 2/28/01.

Advanced Composition Explorer (ACE) – A. Berman

No report

Image – A. Berman

No report

Stardust - R. Ryan

The 20 kW X-band uplink command capability at DSS 43 was successfully demonstrated. The spacecraft remains healthy and is presently at 0.23 AU from Earth (00:03:45 RTLT). The Earth Gravity Assist (EGA) events were successful. The Pre-EGA targeting was precise enough that the clean-up maneuver (TCM-6) was cancelled. The next trajectory correction maneuver (TCM – 7) is planned for March 13, 2002.

Voyager - J. Hall

Voyager 1 and Voyager 2 status is nominal and overall DSN support is good. Voyager 1 heliocentric distance is 80.4 AU with a RTLT of approximately 24 hours. Voyager 2 heliocentric distance is 63.0 AU with a RTLT of approximately 17h 42m.

Cassini - D. Doody

The DSN continues to provide excellent support despite an ongoing one-way Doppler problem. Spacecraft operations are basically nominal with minor instrument anomalies being worked near real time. The Reaction Wheel anomaly long-term approach is being defined. The Huygens Probe link resolution tests with the DSN on DOY 031-036 went well. Jupiter flyby science collection is wrapping up with additional observations planned through DOY 081.

U. S. Space VLBI - V. Altunin

No report

Mission Management Office (MMO) - E. Brower

MGS Flight Operations, science instruments, and flight support systems remain green. A spacecraft internal circuit failure is suspect in causing the x-axis reaction wheel failure on January 18, 2001. The operations strategy is for the spacecraft to use the slew reaction wheel for the remainder of the mission. If predetermined conditions are met, the MGS project intends to complete the extended mission objectives using s-wheel (YZS) spacecraft attitude control.

Ulysses - I. J. Webb

Spacecraft operations are normal. The spacecraft has begun its second orbit around the sun and is currently in nutation operations. A number of equipment failures were experienced during this reporting period. On DOY 051, DSS 34 experienced a command system failure (CPA) while Conscan was enabled on the spacecraft, causing erratic spacecraft maneuver performance and an increase in nutation. On DOY 062, DSS 24 experienced a Telemetry Group Controller (TGC) telemetry predict problem, which delayed the acquisition of 2048 BPS telemetry data.

International Solar Terrestrial Program (ISTP) – A. Chang (No Oral Report)

The ACE spacecraft and subsystems are operating nominally. Nine DSN discrepancies were noted over the past two months. Command testing with the new UPL system has been successful at the 34m BWGs.

IMAGE operations are nominal. The project successfully transitioned to the new DSN UPL command system on January 30, 2001.

POLAR operations are nominal and a POLAR spacecraft flip is scheduled for March 23rd - 25th. A critical spacecraft reconfiguration is scheduled for March 27th and if the reconfiguration is not successful a spacecraft emergency may be declared. Testing with the UPL command system has been successful with the BWG antennas.

SOHO operations are nominal and are in continuous operations. The spacecraft maneuver executed in February was successful, and testing with the new DSN command system (UPL) was also successful.

WIND operations are nominal. A spacecraft maneuver was successfully executed last month with the next maneuver planned for April. Testing with the new DSN command system (UPL) was successful.

Galileo – B. Compton

A real time science buffer dump to tape strategy was successfully completed, and Ganymede 29 encounter data playback was initiated. Their next significant event is the Callisto encounter planned for May 25, 2001.

Deep Space 1 (DS1) – K. Moyd (No Oral Report)

DS1 successfully rebooted the spacecraft to initiate the new flight software on DOY 072. The project is currently recovering to normal operations and the recovery process should be completed by the end of the week.

ACE

Afkhami, F.	GSFC m/s 428.2
Machado, M. J.	GSFC m/s 428.2
Myers, D. A.	GSFC m/s 428.2
Sodano, R. J.	GSFC m/s 581.0

Canberra Deep Space Communications Complex

Churchill, P.	CDSCC
Jacobsen, R.	CDSCC
O'Brien, J. J.	CDSCC
Ricardo, L.	CDSCC
Robinson, A.	CDSCC
Wiley, B.	CDSCC

Cassini

Arroyo, B.	264-235
Chin, G. E.	230-310
Doody, D. F.	230-310
Frautnick, J. C.	230-301
Gustavson, R. P.	230-301
Maize, E. H.	230-104
Mitchell, R. T. (PM)	230-205
Webster, J. L.	230-104

Chandra

Gage, K. R.	SAO
Lavoie, A. R. (PM)	MSFC Org. FD03
Marsh, K.	SAO
Weisskopf, M. C. (PS)	MSFC Org. SD50
Wicker, D.	SAO
Wright, G. M.	MSFC Org. FD03

Deep Space 1

Hunt, J. C.	230-207
Moyd, K. I.	230-207
Rayman, M. D. (PM)	230-207
Tay, P.	264-235
Yetter, K. E.	264-235

Galileo

Compton, B.	230-102
Huynh, J. C.	230-102
McClure, Jr., J. R.	230-102
Medina-Gussie, M.	301-371
Paczkowski, B. G.	230-260
Pojman, J. L.	238-538
Theilig, E. E. (PM)	264-525

Genesis

Arroyo, B.	264-235
Burnett, D. S.	CIT 170-25
Hirst, E. A.	301-180
Sasaki, C. N. (PM)	264-370
Sweetnam, D. N.	264-370
Tay, P.	264-235
Yetter, K. E.	264-235

Goldstone Deep Space Communications Complex

Holmgren, E.	DSCC-25
Massey, K.	DSCC-61
McConahy, R.	DSCC-33
McCoy, J.	DSCC-57
Mischel, D.	DSCC-37
Sturgis, L.	DSCC-33

Goldstone Orbital Debris Radar (GODR)

Goldstein, R. M. (PM)	300-227
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Goldstone Solar System Radar (GSSR)

Haldemann, A. F.	238-420
Hills, D. L.	238-420
Ostro, S. J. (PS)	300-233
Slade, III, M. A. (PM)	238-420
Volken, P. R.	507-105

Gravity Probe-B

Keiser, M. (PS)	Stanford Univ.
Shapiro, Prof. I. I.	Harvard Univ.

IMAGE

Abramo, C. A.	507-120
Burley, R. J.	GSFC m/s 632.0
Green, J. L.	GSFC m/s 630

ISTP (Cluster II)

Abramo, C. A.	507-120
Chang, A. F.	264-844
Christensen, J. L.	GSFC m/s 404.0
Duttilly, R. N.	GSFC m/s 581.1
Gurnett, D.	U. of Iowa
Mahmot, R. E. (Acting PM)	GSFC m/s 444.0
Pickett, J.	U. of Iowa

ISTP (GEOTAIL/POLAR/SOHO/WIND)

Abramo, C. A.	507-120
Alexander, H.	502-320
Bush, R. I.	Stanford Univ.
Carder, M. E.	GSFC 450.C
Chang, A. F.	264-844
Duttilly, R. N.	GSFC m/s 581.1
Hearn, S. P.	GSFC m/s 450.C
Johnston, S. S.	GSFC m/s 444.0
Mahmot, R. E.	GSFC m/s 444.0
Milasuk-Ross, J.	GSFC m/s 428.5
Miller, K. A.	GSFC m/s 450.C
Mish, W. H.	GSFC m/s 690.0
Nace, E. M.	GSFC m/s 450.8
Pukansky, S. M.	GSFC m/s 450.C

JPL/General

Burgess, L. N.	230-107
Burton, M. E.	169-506
Finley, S. G.	11-116
Gershman, R.	264-440
Holladay, J. A.	303-404
Jurgens, R. F.	238-420
Kahn, P. B.	301-486
Kliore, A. J.	161-260
Kobrick, M.	300-233
Moore, W. V.	161-260
Morabito, D. D.	161-260
Naudet, C. J.	238-600
Resch, G. M.	238-600
Robbins, P. E.	161-260
Silva, A.	149-200
Smith, J. L.	301-180
Taylor, A. H.	264-538
Toyoshima, B.	301-276
Winterhalter, D.	169-506
Woo, H. W.	126-110
Yung, C. S.	238-808

Madrid Deep Space Communications Complex

Chamarro, A.	MDSCC
Rosich, A.	MDSCC

MAP

Abramo, C. A.	507-120
Citrin, E. A. (PM)	GSFC m/s 410.2
Coyle, S. E.	GSFC m/s 581.0
Dew, H. C.	GSFC m/s 423.0

Mars Exploration Rover (MER A & B)

Adler, M.	T-1723
Arroyo, B.	264-235
Chadbourne, P.	230-207
Crisp, J. A. (PS)	241-105
Erickson, J. K.	T-1723
Roncoli, R. B.	301-140L
Theisinger, P. C. (PM)	301-455

Mars Express Orbiter

Horttor, R. L. (PM)	238-540
Thompson, T. W.	300-227

Mars Global Surveyor

Arroyo, B.	264-235
Brower, E. E.	264-235
Thorpe, T. E. (PM)	264-214
Yetter, K. E.	264-235

Mars Program Office

Cutts, J. A.	264-426
Jordan, Jr., J. F.	264-472
McCleese, D. J.	264-426
Naderi, F. M.	264-438

Mars Reconnaissance Orbiter Project

Arroyo, B.	264-235
Graf, J. E. (PM)	264-440
Johnston, M. D.	301-140L
Lock, R. E.	301-140L

Mars 2001 Odyssey Mission

Arroyo, B.	264-235
Harris, J. A.	301-455
Mase, R. A.	264-380
Nakata, A. Y.	264-235
Pace, Jr., G. D. (PM)	264-255
Spencer, D. A.	264-255

NASA Headquarters

Costrell, J. A.	Code MT
Hertz, P.	Code SR
Holmes, C. P.	Code SR
Spearing, R. E.	Code M-3

NASA/ARC/General

Campo, R. A.	ARC 244-14
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NASA/GSFC/General

Barbehenn, G. M.	GSFC m/s 440.8
Levine, A. J.	GSFC m/s 452.0
Martin, J. B.	GSFC m/s 451.0

NASA/SOMO

Dalton, J. T.	GSFC m/s 720.0
Downen, A. Z.	303-400
Hall, V. F.	JSC Code TG
Morse, G. A.	JSC Code TA
Thompson, E. W.	JSC Code GA

NEAR

Antreasian, P. G.	301-276
Farquhar, R.	APL 2-155
Holdridge, M.	APL 13N-319
Miller, J. K.	301-125J
Moore, G. A.	APL 13N-319
Santo, A. G.	APL M1-126
Williams, B. G.	301-125J

NOZOMI (Planet B)

Chang, A. F.	264-844
Tay, P.	264-235
Yetter, K. E.	264-235

Outer Planets/Solar Probe

Carraway, J. B.	301-335
Ludwinski, J. M.	301-335

Radio Astronomy

Klein, M. J. (PM)	303-402
Kuiper, T. B. (PS)	169-506
Martinez, G.	507-120
Wolken, P. R.	507-105

Space Infrared Telescope Facility (SIRTF)

Arroyo, B.	264-235
Ebersole, M. M.	264-767
Gallagher, D. B. (PM)	264-767
Kwok, J. H.	264-767

StarLight Mission

Deutsch, M. C.	301-250D
Linfield, R. P. (PS)	301-486
Livesay, L. L. (PM)	301-451
Spradlin, G. L.	303-402

Stardust

Duxbury, T. C. (PM)	264-379
Ryan, R. E.	301-285
Tay, P.	264-235
Yetter, K. E.	264-235

TMOD / General

Coffin, R. C.	303-400
Doms, P. E.	303-400
Polansky, R. G.	303-400
Squibb, G. F.	303-400
Stelzried, C. T.	303-407

TMOD / Mission Management Office

Rosell, S. N.	264-235
Varghese, P.	264-235

TMOD / DSMS Engineering

Freiley, A. J.	303-404
Kimball, K. R.	303-404
Klose, J. C.	303-404
Kurtik, S. C.	303-210
Osman, J. W.	303-210
Sible, Jr., R. W.	303-404
Statman, J. I.	303-404

TMOD / DSMS Operations

Almassy, W. T.	502-420
Covate, J. T.	507-120
Dillard, D. E.	507-120
Frazier, R.	507-120
Gillam, I. T.	502-400
Green, J. C.	507-120
Hodder, J. A.	303-403
Knight, A. G.	507-120

Landon, A. J.	507-105
Martinez, G.	507-120
Nevarez, R. E.	502-400
Recce, D. J.	303-403
Roberts, J. P.	502-400
Salazar, A. J.	303-403
Schroeder, H. B.	507-120
Short, A. B.	507-120
Wackley, J. A.	303-403
Waldherr, S.	507-120
Watzig, G. A.	502-420
Wert, M.	502-420

TMOD / DSMS Plans & Commitments

Abraham, D. S.	303-402
Altunin, V. I.	303-402
Bathker, D. A.	303-402
Benson, R. D.	264-844
Berman, A. L.	264-844
Beyer, P. E.	264-844
Black, C. A.	303-402
Cesarone, R. J.	303-402
Chang, A. F.	264-844
Gillette, R. L.	264-844
Griffith, D. G.	303-402
Holmes, D. P.	264-844
Kazz, G. J.	303-402
Luers, E. B.	303-402
Miller, R. B.	303-402
Peng, T. K.	303-402
Poon, P. T.	264-844
Slusser, R. A.	264-844
Wessen, R. R.	264-844
Yetter, B. G.	264-844

TMOD / DSMS RAPSO

Bartoo, R. H.	301-285
Borden, C. S.	301-165
Burke, E. S.	303-403
Caputo, R.	514-200
Hampton, E.	600-174
Hincy, W.	600-174
Hungerford, R. M.	301-285
Kehrbaum, J. M.	301-180
Kim, K.	600-174
Lacey, N.	600-174
Leppla, F. B.	600-174
Lineaweaver, S.	600-174
Martinez, K. A.	600-174
Morris, D. G.	303-403
Valencia, J.	600-174
Wang, Y-F.	301-165
Zendejas, S. C.	301-165

Ulysses / Voyager

Bray, T. L.	264-114
Brymer, B. F.	264-114
Cummings, A. C.	CIT 220-47
Hall, Jr., J. C.	264-801
Massey, E. B. (PM)	264-801
Nash, J. C.	264-114
Smith, E. J. (PS - ULS)	169-506
Webb, I. J.	264-114

U.S. Space VLBI

Altunin, V. I.	303-402
Miller, K. J.	264-828
Smith, J. G. (PM)	264-828

YOHKOH

Chang, A. F.	264-844
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Other Organizations

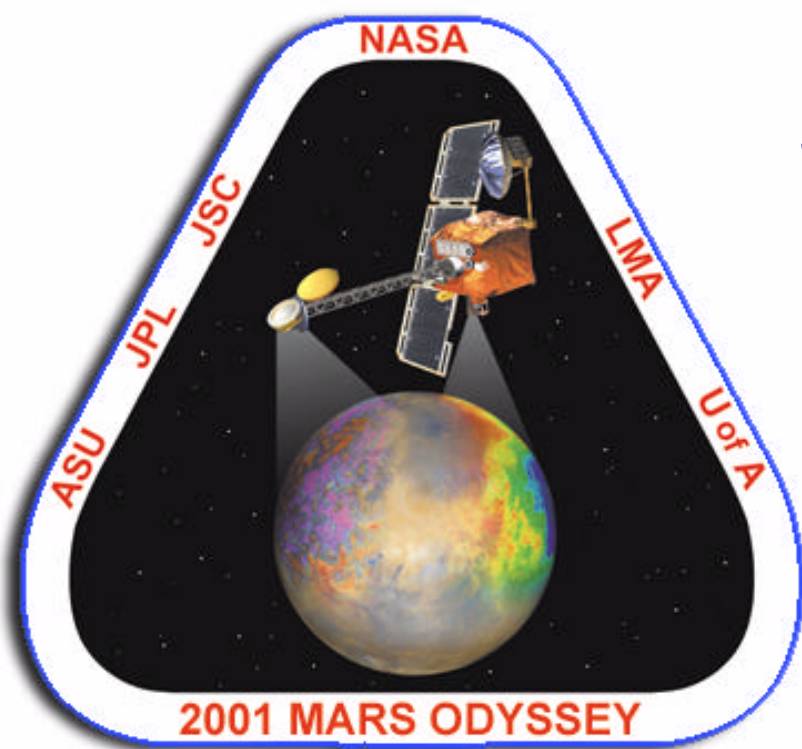
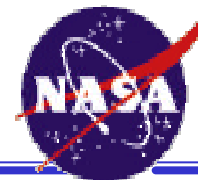
Crimi, G. F.	SAIC
Laemmel, G.	DLR-GSOC
Wanke, H.	DLR-GSOC

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list and return to:

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Pasadena, CA 91109 / 818-393-3535
email: David.G.Morris@jpl.nasa.gov



2001 Mars Odyssey Mission Overview



A Special Report to the
**Joint Users Resource Allocation
Planning Committee**

Robert Mase (for D. Spencer)

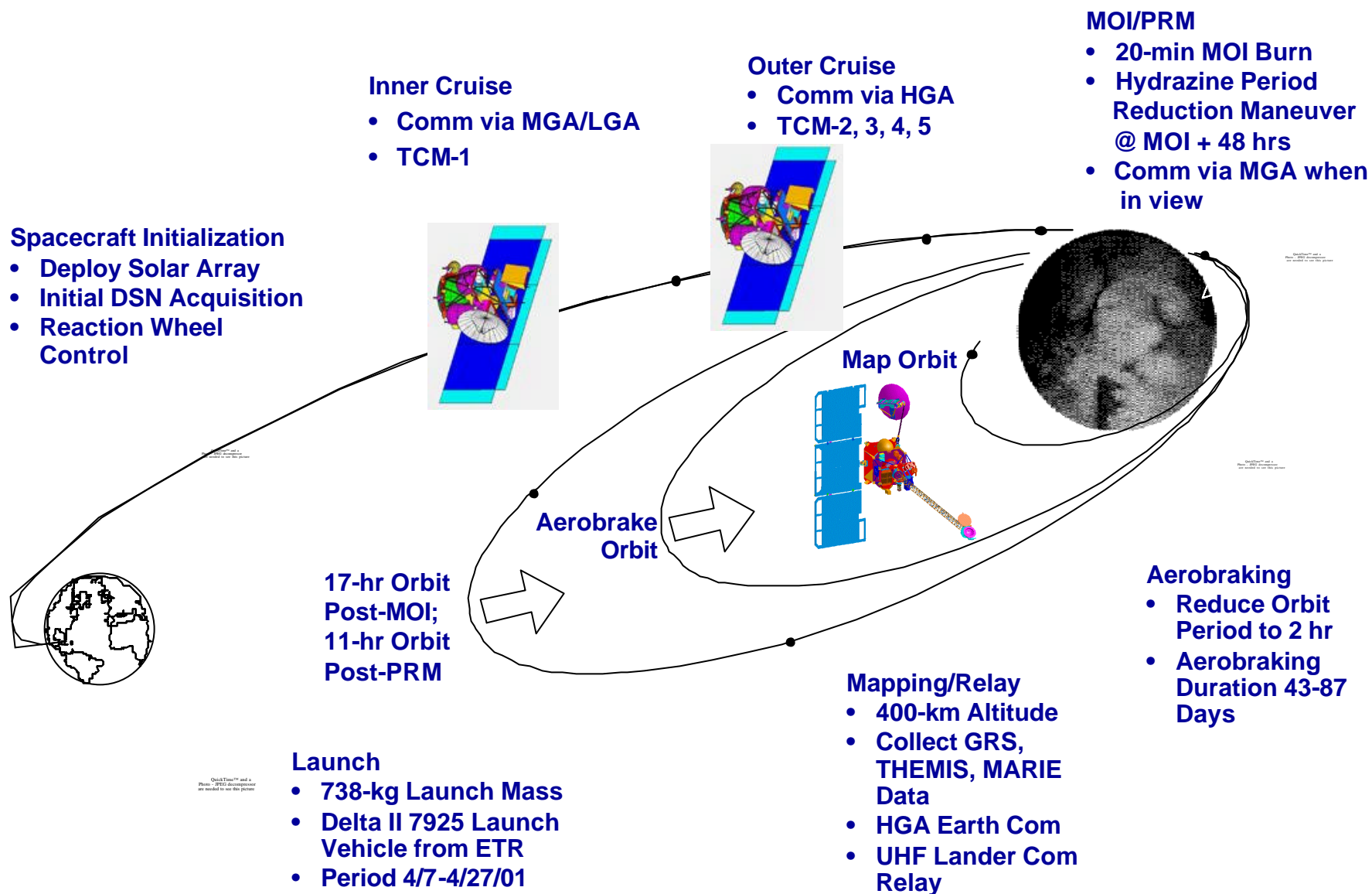
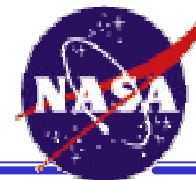
March 15, 2001

NASA Jet Propulsion Laboratory

<http://mars.jpl.nasa.gov/odyssey/mission/launch.html>



2001 Mars Odyssey Mission Schematic

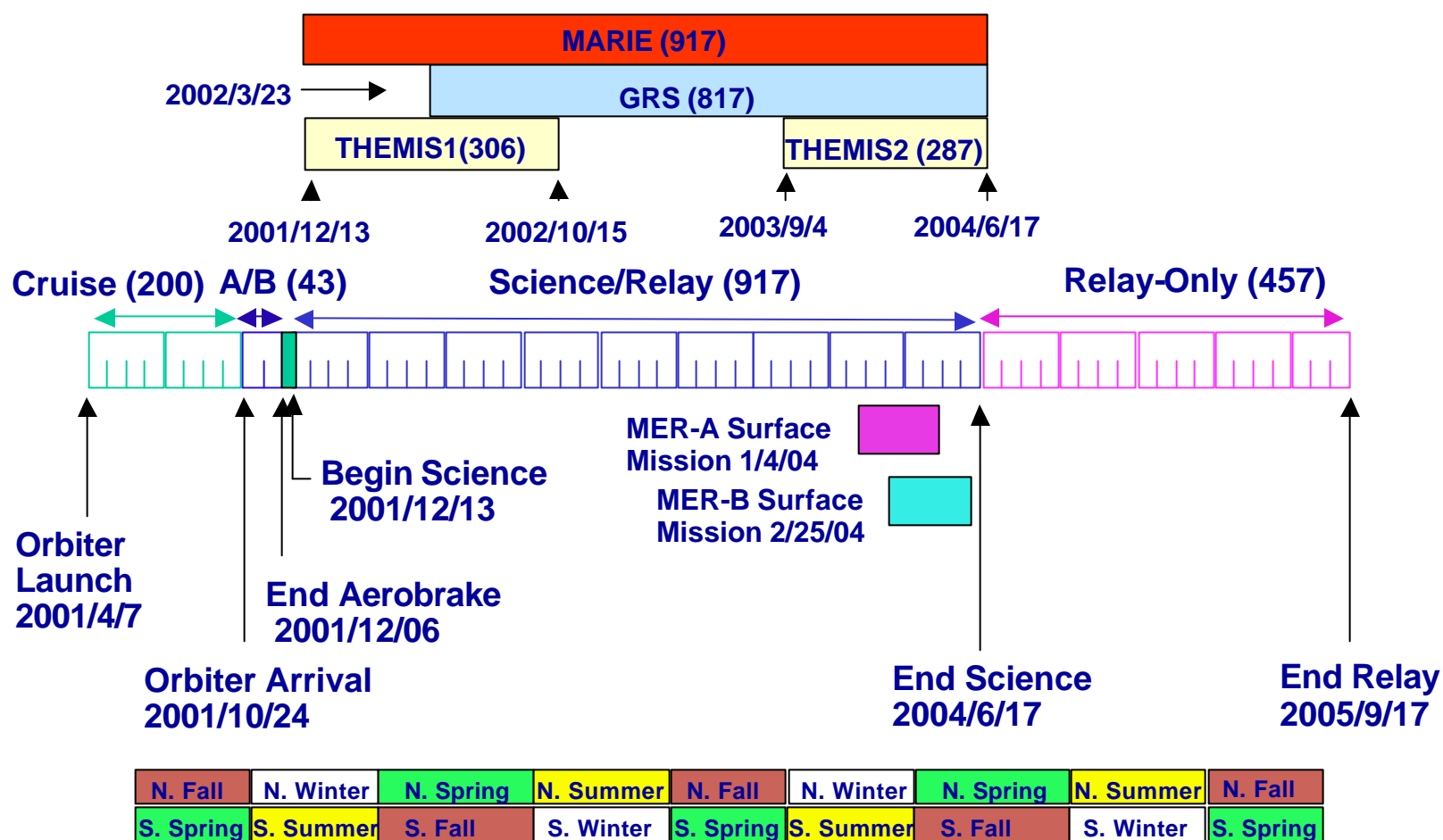




2001 Mars Odyssey Mission Timeline

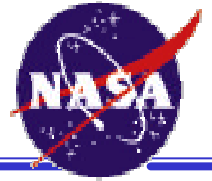


Assumes launch at open of launch period



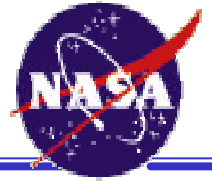


2001 Mars Odyssey Science Objectives



- Globally map the elemental composition of the surface.
- Determine the abundance of hydrogen in the shallow subsurface.
- Acquire high spatial and spectral resolution images of the surface mineralogy.
- Provide information on the morphology of the Martian surface.
- Characterize the Martian near-space radiation environment as related to radiation-induced risk to human explorers.

2001 Mars Odyssey Launch Information



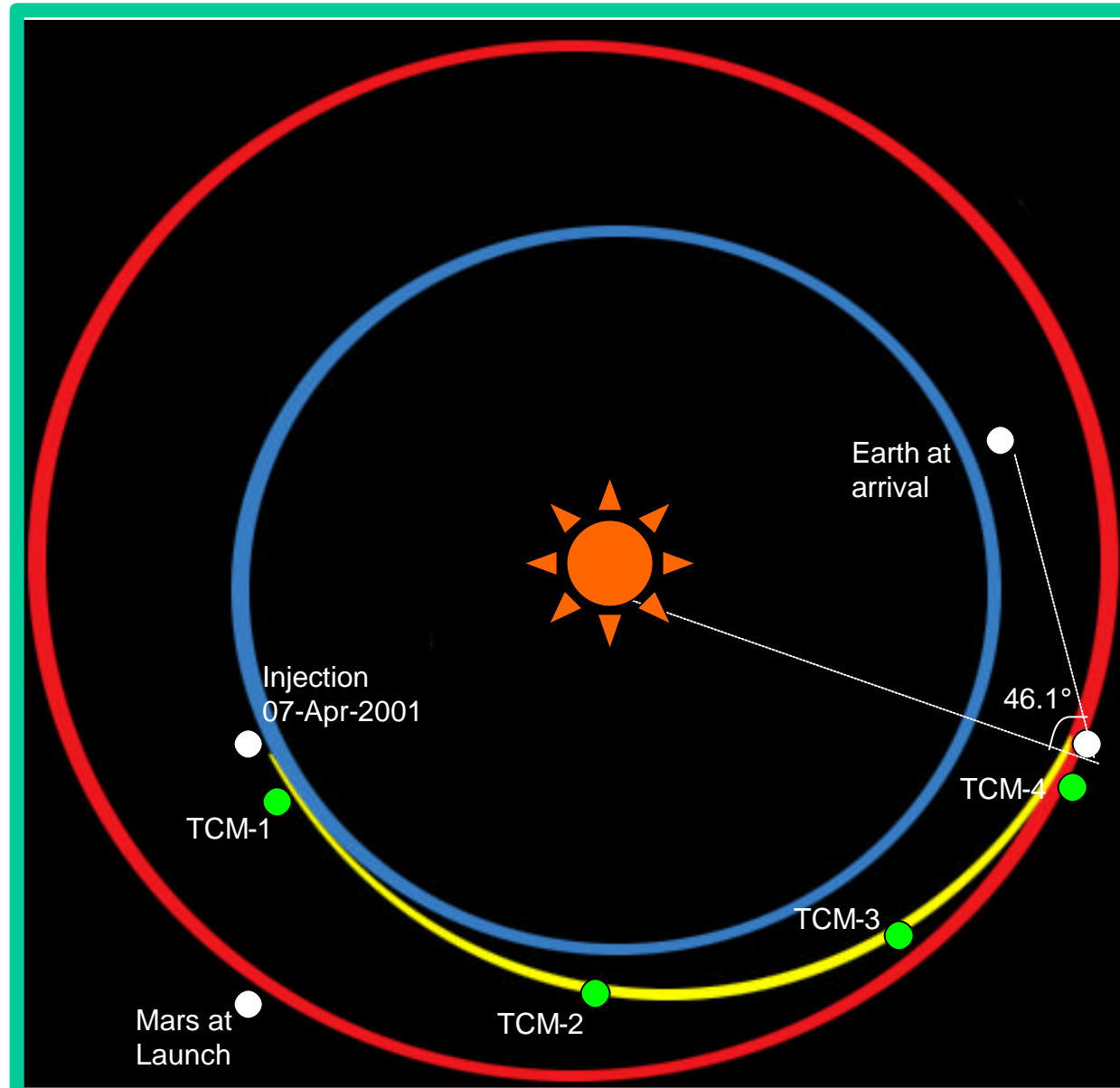
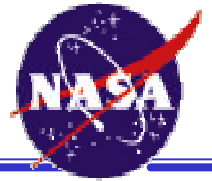
- Launch Date
 - April 07, 2001
- Arrival Date
 - October 24, 2001
- Launch Vehicle
 - Boeing Delta II 7925



2001 Mars Odyssey



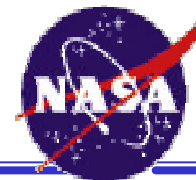
Odyssey Interplanetary Trajectory



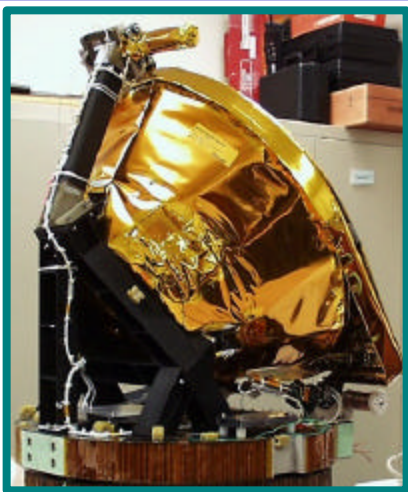


2001 Mars Odyssey

Gamma-Ray Spectrometer (GRS)



Gamma
Sensor Head



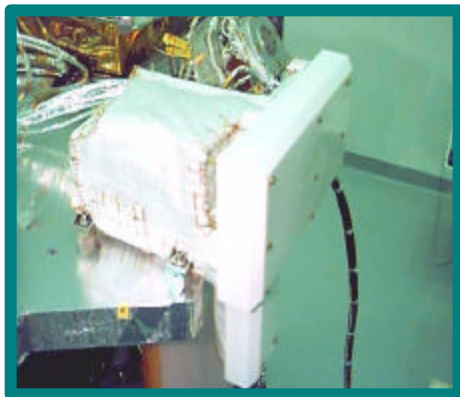
OBJECTIVES: Full planet mapping of elemental abundance with an accuracy of 10% or better and a spatial resolution of about 300 km, by remote gamma-ray spectroscopy, and full planet mapping of the hydrogen (with depth of water inferred) and CO₂ abundances by remote neutron spectroscopy

SCIENCE TEAM: PI is William Boynton. Co-I's are James Arnold, Peter Englert, William Feldman, Albert Metzger, Steve Squyres, Jacob Trombka, Heinrich Waenke, Claude d'Uston. HEND PI is Igor Mitrofanov.

SUPPLIERS: U of Arizona, LANL, A.D. Little, Eurisys Measures (France), and IKI (Russian Space Research Institute). Chris Shinohara is Instr. Mgr.

HARDWARE: GRS sensor head with 85 K cooler, neutron spectrometer (NS), & high energy neutron detector (HEND). Cooler FOV = 170°. Energy range is 0.2 to 16 MeV. CPU = 386.

INTERFACE: Mass = 30.1 kg. Power = 27.6 W. Volume = 48 dia. x 26 cm gamma sensor head, 13 x 13 x 29 cm NS, 27 x 22 x 19.2 cm HEND. Data rate = 2.5kbsp. 100°C annealing. 6 m boom. S/C materials usage requirements



High Energy Neutron
Detector

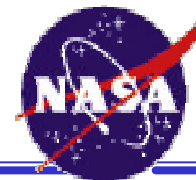
Neutron
Spectrometer



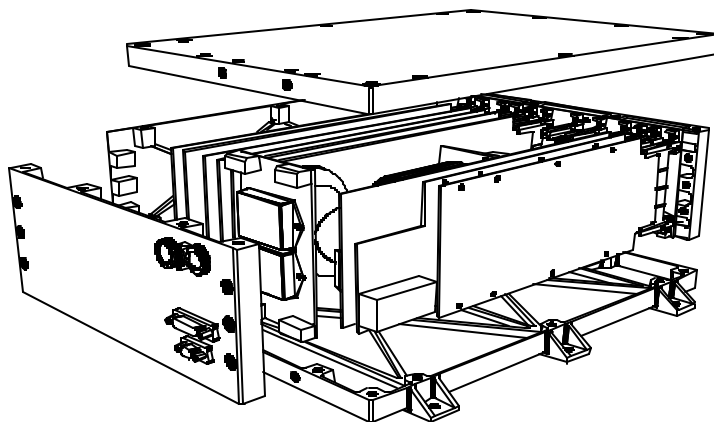


2001 Mars Odyssey

Martian Radiation Environment Experiment (MARIE)



MARIE ORBITER



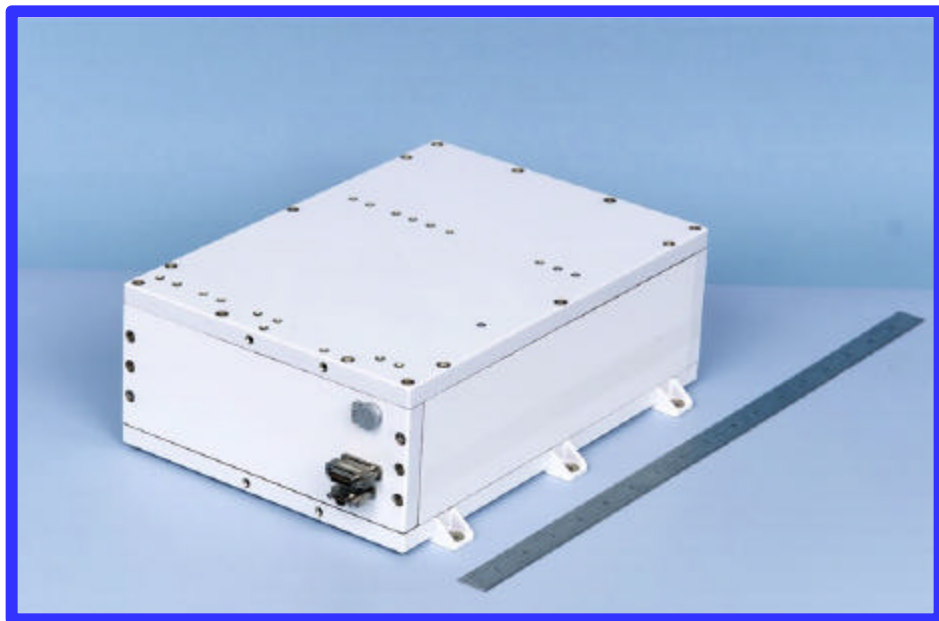
OBJECTIVES: Orbiter MARIE - Characterize specific aspects of near-space radiation environment as related to radiation-induced risk to human exploration.

SCIENCE TEAM: PI is Gautam Badhwar (JSC).

SUPPLIERS: JSC. Robert Dunn is the Instrument Manager. Subcontractors are Lockheed Martin and Battelle Pacific Northwest.

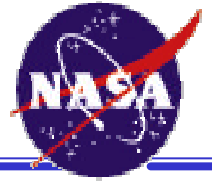
HARDWARE: Energetic particle spectrometer, 56° FOV, 2 silicon detectors 25.4 x 25.4 mm, 120 MB flash memory, Intel processor. Measures SEP events from 15 to 500 MeV/nucleon.

INTERFACE: Mass = 4.0 kg. Power = 7 W. Volume = 10.8H x 29.4L x 23.2Wcm. Data rate is 3 Mbits per day over RS-422 low speed data line.



2001 Mars Odyssey

Thermal Emission Imaging System (THEMIS)



OBJECTIVES: Determine the mineralogical composition of the surface for minerals whose abundance is approximately 10% or greater and at spatial scales of approximately 100 m. Provide information on the morphology of the surface such that features significantly less than 100 m can be adequately resolved.

SCIENCE TEAM: PI is Philip Christensen (ASU). Co-I's are Bruce Jakosky, Hugh Kieffer, Mike Malin, Harry McSween, and Kenneth Nealson.

SUPPLIERS: Arizona State U, SBRS, MSSS. Greg Mehall is the Instrument Manager.

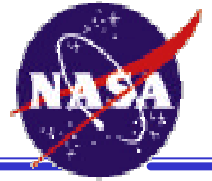
HARDWARE: Multi-spectral IR image, visible imager (M98 heritage), 3 mirror, 20 cm focal length, f/1.7 anastigmat telescope, 4.6° (along track) by 3.5° (downtrack) IR FOV, 2.9° x 2.9° Vis FOV. Resolution = 100 m (IR) and 20 m (VIS). Spectral Range = 6.5 to 15.5 μ (IR) and 0.425 to 0.8 μ (Vis). Detectors are 320 x 240 pixels (IR) & 1024 x 1024 pixels (VIS).

INTERFACE: Mass = 12.8 kg. Power = 14 W. Volume = 55.8L x 37.9H x 28.0W cm. Uses 2 high speed RS-422 data lines.

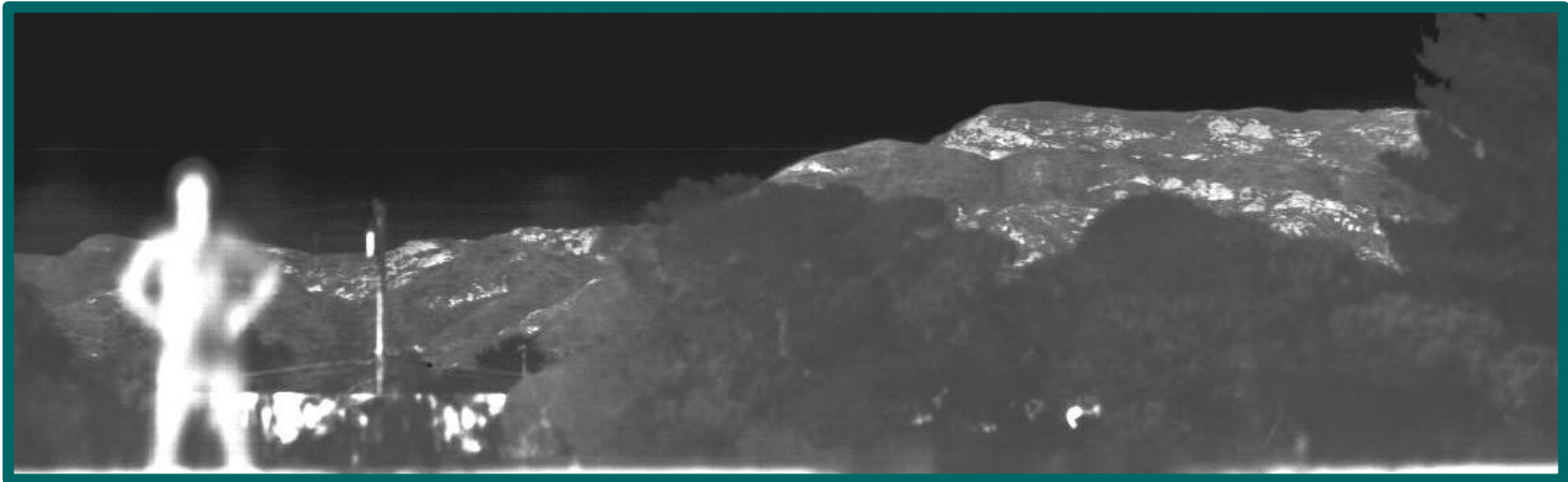
DATA RETURN: Entire planet mapped in IR.
Up to 15,000 visible images.

2001 Mars Odyssey

THEMIS Image

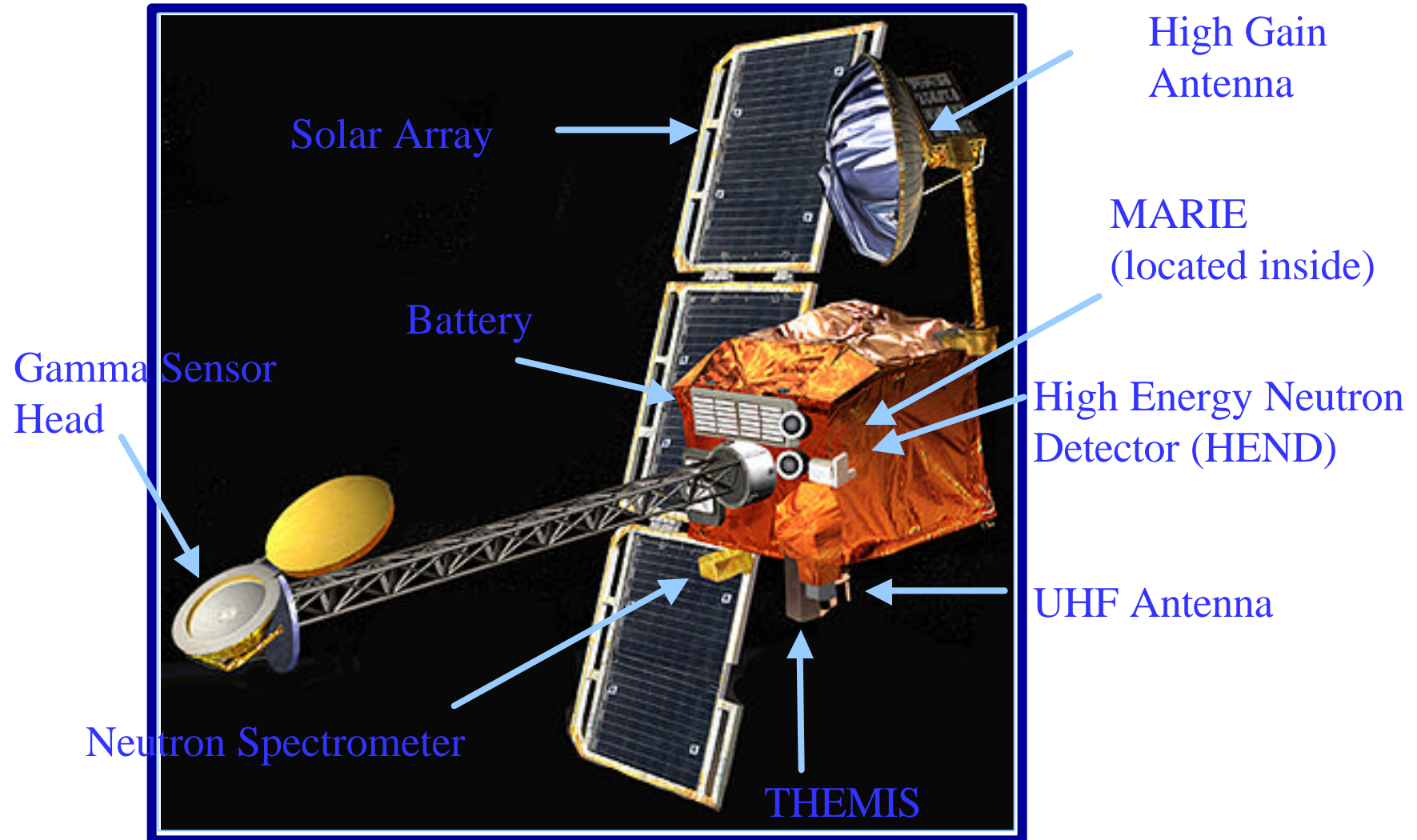
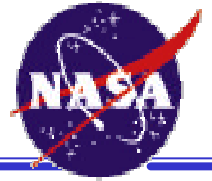


JPL

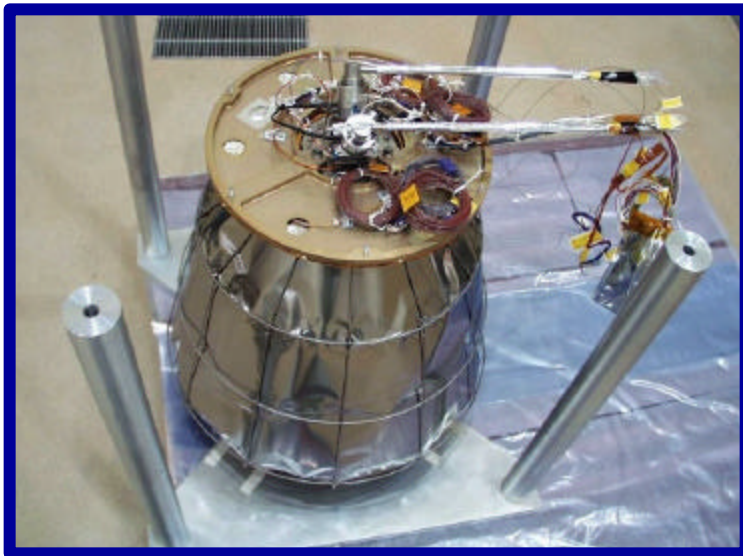
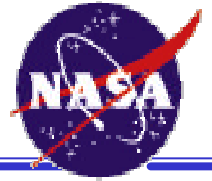


2001 Mars Odyssey

Odyssey Science Orbit Configuration



2001 Mars Odyssey Spacecraft Images



Orbiter
Main
Engine

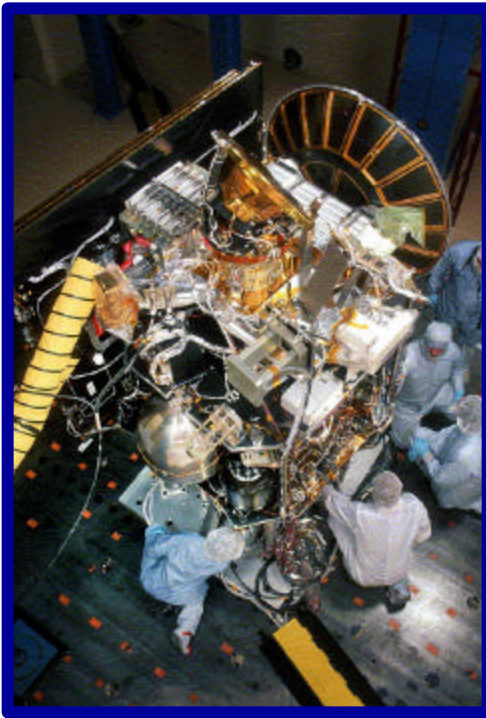


Solar
Array
Testing

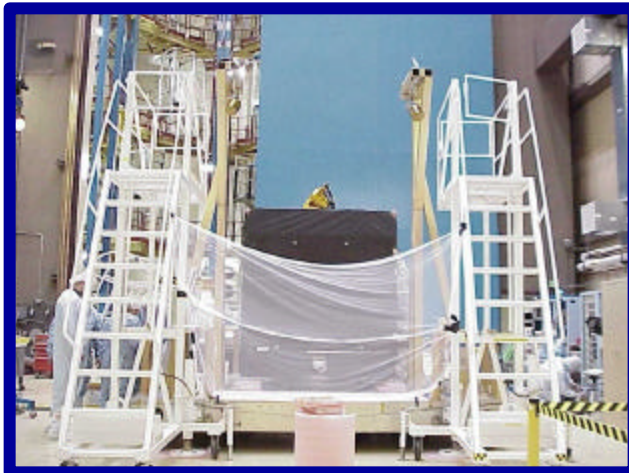
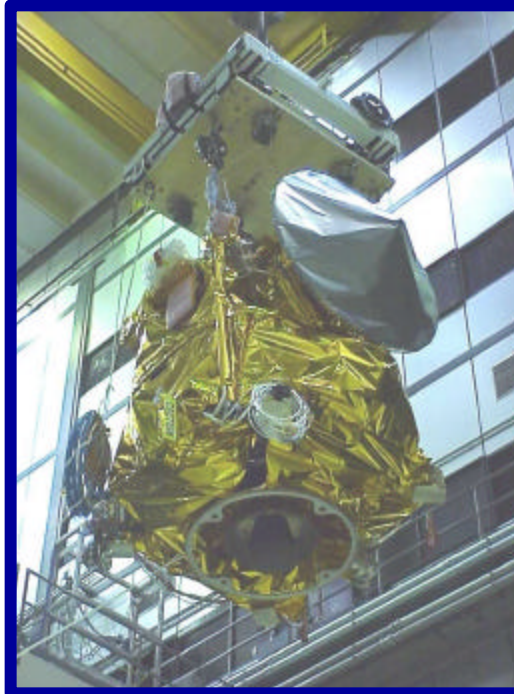


ODYSSEY ENVIRONMENTAL TESTING

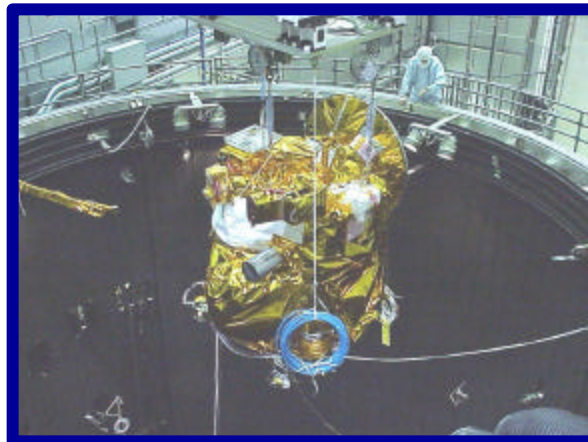
July – November 2000



FINAL PREPS FOR ACOUSTICS



SOLAR ARRAY DEPLOYMENT TEST



LIFT INTO TVAC CHAMBER

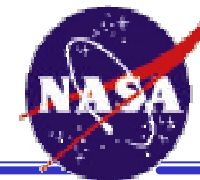


FINAL PREPS FOR TVAC



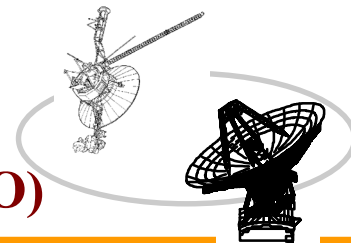
2001 Mars Odyssey

DSN Tracking Allocations



Mission Phase	Absolute Date		Duration	Primary DSN Resource	Tracking	Average Pass Length	Comments
	From	To					
Launch	6-Apr-97						
Post-Launch	6-Apr-97	13-Apr-97	7 days	70m/34m	2 pass/day	~16 hrs / pass	Dual Stations for Launch
Early Cruise	13-Apr-97	20-Apr-97	7 days	34 m	1 pass/day	~16 hrs / pass	Canberra only visible Station
Cruise	20-Apr-97	30-Jun-97	71 days	34 m	3 pass/wk	8 hrs / pass	
TCM-2 Coverage	30-Jun-97	10-Jul-97	10 days	34 m	3 pass/day	8 hrs / pass	Continuous for TCM-2
Cruise	10-Jul-97	3-Sep-97	55 days	34 m	3 pass/wk	8 hrs / pass	
Mars Approach	3-Sep-97	23-Oct-97	50 days	34 m	3 pass/day	8 hrs / pass	Continuous for Mars Approach
Encounter (MOI)	23-Oct-97		(200 days)	70m/34m	1 pass		Redundant 70m coverage for MOI
Orbit Insertion	23-Oct-97	31-Oct-97	8 days	70m/34m	3 pass/day	8 hrs / pass	Extra Coverage for Insertion
Primary Aerobraking	31-Oct-97	11-Dec-97	41 days	34 m	3 pass/day	8 hrs / pass	Continuous for Aerobraking
Extended Aerobraking	11-Dec-97	19-Jan-98	39 days	70m	3 pass/day	8 hrs / pass	Continuous for Aerobraking
Transition to Mapping	19-Jan-98	26-Jan-98	7 days	70m	6 pass/day	8 hrs / pass	Continuous for Transition
Begin Science Mission	26-Jan-98		(95 days)				
THEMIS I	26-Jan-98	22-Dec-98	330 days	70 m	2 pass/day	14 hrs / day	14 hrs per day during science phas
GRS	22-Dec-98	28-Oct-99	310 days	34 m	2 pass/day	14 hrs / day	
THEMIS II	28-Oct-99	31-Jul-00	277 days	70 m	2 pass/day	14 hrs / day	
End of Science Mission	31-Jul-00		(917 days)				
Relay Mission	31-Jul-00	31-Oct-01	457 days	34 m	1 pass/day	8 hrs / pass	
Extended Relay Mission	31-Oct-01	18-Sep-03	687 days	34 m	1 pass/day	8 hrs / pass	
End of Mission	18-Sep-03		(1144 days)				
Total:			2356 days				

Significant Events	Absolute Date	Relative Date	DOY	Notes:
Launch	6-Apr-97	L + 000 days	2001 - 097	• Launch period is 07-Apr-2001 to 27-Apr-2001
TCM-1	14-Apr-97	L + 008 days	2001 - 105	• Arrival period is 24-Oct-2001 to 27-Oct-2001
TCM-2	5-Jul-97	L + 090 days	2001 - 187	• Launch from ETR
Mars Approach Phase	3-Sep-97	E - 050 days	2001 - 247	• Canberra is the only visible station during early cruise with >16 hour pass lengths
TCM-3	13-Sep-97	E - 040 days	2001 - 257	• During Mapping Phase require 14 hours of tracking per day
TCM-4	11-Oct-97	E - 012 days	2001 - 285	• During THEMIS opportunities, need 70m X-band U/L (for Nav) and D/L for science data
TCM-5	23-Oct-97	E - 007 hours	2001 - 297	• Continuous for ±5 days around TCM-2
MOI	23-Oct-97	E - 000 days	2001 - 297	• 3 passes per week (during quiescent cruise) rotating complexes
PRM	25-Oct-97	E + 002 days	2001 - 299	• DDOR Twice per week for last 8 weeks of cruise (16 measurements: Wks 36-43)
AB-1	27-Oct-97	E + 004 days	2001 - 301	• DDOR Once per week for previous 13 weeks (13 Measurements: Wks 23-35)
Begin Science Mission	26-Jan-98	E + 095 days	2001 - 027	• 3-way doppler during Goldstone/Canberra overlaps during last 50 days
End of Science Mission	31-Jul-00	E + 1012 days	2001 - 214	• Redundant 70m coverage for: all TCMs, MOI, PRM, AB-1
End of Relay Mission	18-Sep-03	E + 2156 days	2001 - 262	• Redundant 70m coverage for: Launch, Orbit Insertion Phase, Aerobraking End Game

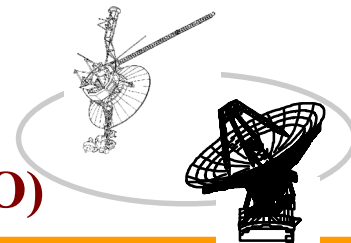


JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

Action Item Status
From 13 February 2001 RARB

David G. Morris

March 15, 2001



Action Item Summary

<i><u>AI#CP#</u></i>	<i><u>Year</u></i>	<i><u>Month(s)</u></i>	<i><u>Week(s)</u></i>	<i><u>System</u></i>	<i><u>Responsible</u></i>	<i><u>Due Date</u></i>	<i><u>Status</u></i>
01 N/A	2002			NSP	S. Kurtik	4/27/2001	Open

Action: Network Simplification Project (NSP) will be eliminating the TRK-2-15A interface. Action is to investigate whether any changes to the GSFC-JPL ICD are needed and to specifically verify that the Flight Dynamics Facility (FDF) at GSFC is aware and is not affected by this change.



JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE



Resource Analysis Team

*Kevin Kim for
Frank Leppla*

March 15, 2001



- **RESOURCE NEGOTIATION STATUS**

- 2001 WEEK 20 (THRU 05/20/2001) WAS RELEASED TO DSN ON 03/09/2001
- 2001 WEEK 21 (THRU 05/27/2001) IS DUE TO BE RELEASED ON 03/19/2001
- 2001 WEEKS 27 - 31 (THRU 08/05/2001) WILL GO INTO NEGOTIATIONS STARTING 03/19/2001



- **SPECIAL STUDIES/ACTIVITIES**
 - VSOP2 LOAD STUDY
 - CONTOUR LOAD STUDY

- **ON-GOING ACTIVITIES**
 - MADB/TIGRAS TESTING AND TRAINING
 - DEEP IMPACT LOAD STUDY
 - GALILEO EXTENDED MISSION STUDY
 - IMAGE LOAD STUDY
 - MEO LOAD STUDY
 - STEREO LOAD STUDY
 - ULYSIS REQUIREMENTS ANALYSIS



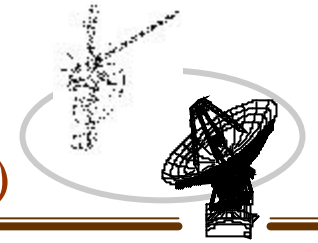
- **RARB - FEBRUARY 13, 2001**

MINUTES POSTED ON RAPWEB:

<http://rapweb.jpl.nasa.gov>



TELECOMMUNICATIONS AND MISSION OPERATIONS DIRECTORATE



JPL

Resource Allocation Planning & Scheduling Office (RAPSO)

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE



DSS DOWNTIME FORECAST

Jose Valencia

March 15, 2001

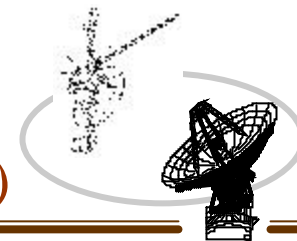
NASA Jet Propulsion Laboratory

DSN Downtime & Test Schedule is located on the RAP WWW Homepage at: <http://rapweb.jpl.nasa.gov>

**Although every effort is made to ensure the accuracy of this Downtime Planning report, changes can and do occur.
The DSN 7-Day Schedule takes precedence over this document.**



TELECOMMUNICATIONS AND MISSION OPERATIONS DIRECTORATE



Resource Allocation Planning & Scheduling Office (RAPSO)

<u>FACILITY</u>	<u>TASK</u>	<u>SCHEDULE</u>	<u>DURATION</u>
DSS-14	Antenna Controller Replacement	Weeks 28 – 40 / 2004	13 Weeks
CANBERRA DSS-43	Antenna Controller Replacement	*07/26/04 - 10/03/04 No Proposal (possible in 2005)	10 Weeks
MADRID DSS-63	Antenna Controller Replacement	*10/11/04 - 12/19/04 No Proposal (possible in 2005)	10 Weeks
DSS-65	Antenna Controller Replacement	Weeks 07 - 13 / 2004	7 Weeks

*Request Window: Earliest Start - Latest Finish

Antenna Controller Replacement implementation priority:

1. Goldstone
2. Canberra
3. Madrid

One month turn-a-round between each complex is needed.

MAJOR DSN DOWNTIMES by DATE

The highlighted rows indicate changes made since last JURAP 1/18/01.

Year	Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
2001	DSS 63	70M X-Band Uplink	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Feedcone Structure	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Hydrostatic Bearing Regrout	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Counterweight Rebalance	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Az Cablewrap Rehab	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Chiller+HtExch HVAC Mods	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 16	Servo Hydraulic Drive Replacement	08/20/01	09/16/01	28	34-37	232	259
2002	DSS 66	Servo Hydraulic Drive Replacement	06/24/02	07/21/02	28	26-29	175	202
2002	DSS 14	70M Servo Drive Upgrade	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 14	NIB - NSP Implementation	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 15	NSP Implementation	08/01/02	09/27/02	58	31-39	213	270
2002	DSS 24	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 45	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NSP Impementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 26	NSP Test and Training	10/01/02	03/30/03	181	40-13	274	089
2002	DSS 24	NIB - 20kwatt X-Band Txr Installation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NIB - 20kwatt X-Band Txr Installation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 43	70M Servo Drive Upgrade	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - Ball-Joint Pad Refurbishment	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
2002	DSS 65	NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
2003	DSS 63	70M Servo Drive Upgrade	02/10/03	04/20/03	70	07-16	041	110
2003	DSS 63	NIB - Ball-Joint Pad Refurbishment	02/10/03	04/20/03	70	07-16	041	110
2003	DSS 63	NIB - NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NIB - 20kwatt X-Band Txr Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - 20kwatt X-Band Txr installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 15	Antenna Controller Replacement	03/03/03	05/04/03	63	10-18	062	124
2003	DSS 46	Servo Hydraulic Drive Replacement	05/05/03	06/01/03	28	19-22	125	152
2003	DSS 45	Antenna Controller Replacement	09/08/03	10/25/03	48	37-43	251	298
2004	DSS 65	Antenna Controller Replacement	02/09/04	03/28/04	49	07-13	040	088
2004	DSS 14	Antenna Controller Replacement	07/05/04	10/03/04	91	28-40	187	277

MAJOR DSN DOWNTIMES by SITE by Year

The latest update is on:3/12/01 9:49:00 AM

*The highlighted portion indicates the last change made.

Year	Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
2001	DSS 16	Servo Hydraulic Drive Replacement	08/20/01	09/16/01	28	34-37	232	259
2001	DSS 63	70M X-Band Uplink	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Feedcone Structure	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Hydrostatic Bearing Regrout	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Counterweight Rebalance	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Az Cablewrap Rehab	07/23/01	10/10/01	80	30-41	204	283
2001	DSS 63	NIB - Chiller+HtExch HVAC Mods	07/23/01	10/10/01	80	30-41	204	283
2002	DSS 14	70M Servo Drive Upgrade	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 14	NIB - NSP Implementation	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 15	NSP Implementation	08/01/02	09/27/02	58	31-39	213	270
2002	DSS 24	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 24	NIB - 20kwatt X-Band Txr Installation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 26	NSP Test and Training	10/01/02	03/30/03	181	40-13	274	089
2002	DSS 43	70M Servo Drive Upgrade	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - Ball-Joint Pad Refurbishment	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
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2002	DSS 54	NSP Impementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NIB - 20kwatt X-Band Txr Installation	10/01/02	11/22/02	53	40-47	274	326
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2003	DSS 25	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NIB - 20kwatt X-Band Txr Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - 20kwatt X-Band Txr installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 45	Antenna Controller Replacement	09/08/03	10/25/03	48	37-43	251	298
2003	DSS 46	Servo Hydraulic Drive Replacement	05/05/03	06/01/03	28	19-22	125	152
2003	DSS 63	70M Servo Drive Upgrade	02/10/03	04/20/03	70	07-16	041	110
2003	DSS 63	NIB - Ball-Joint Pad Refurbishment	02/10/03	04/20/03	70	07-16	041	110
2003	DSS 63	NIB - NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2004	DSS 14	Antenna Controller Replacement	07/05/04	10/03/04	91	28-40	187	277
2004	DSS 65	Antenna Controller Replacement	02/09/04	03/28/04	49	07-13	040	088



DSN Operations

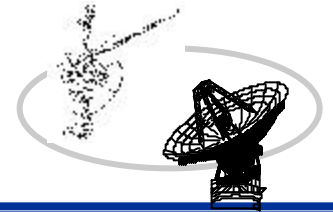


Jim Hodder

March 15, 2001

NASA Jet Propulsion Laboratory

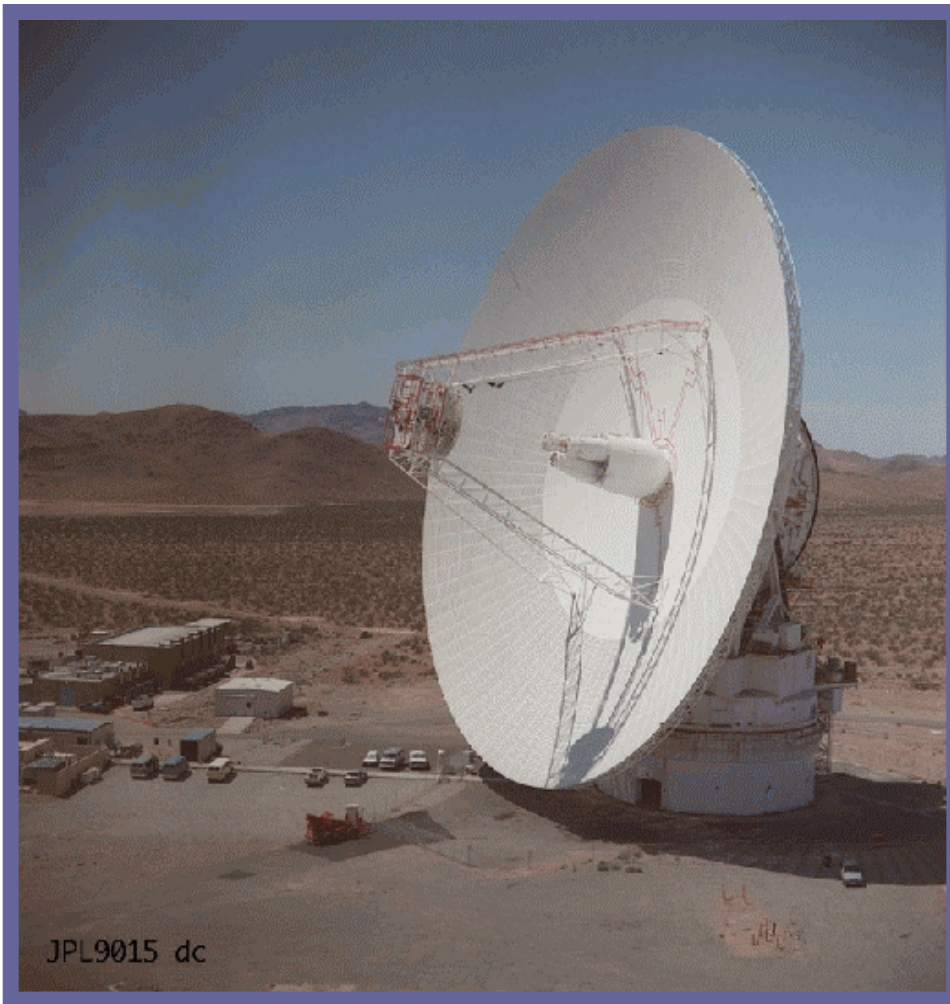
JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE



DSN System Availability

<u>Data Type</u>	<u>January 2000</u>	<u>February 2000</u>
Telemetry	98.7%	99.1%
Tracking	98.7%	98.5%
Command	99.2%	98.5%
Monitor	99.2%	99.3%
Radio Science	98.6%	99.9%
VLBI	99.4%	98.7%

Goldstone Solar System Radar



Martin A. Slade

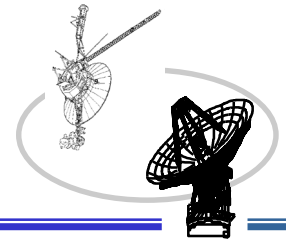
March 15, 2001

NASA Jet Propulsion Laboratory

Joint Users Resource Allocation Planning Committee Meeting



Goldstone Solar System Radar (GSSR)



- Observations of Near-Earth Asteroids 1950 DA and 2000 PN9 were successful on March 2, 3, 4, and 7
- Both 2000 PN9 and 1950 DA are potentially hazardous asteroids, and determination of their orbital parameters to high accuracy was very important
- Arecibo to Goldstone radar interferometric observations of Venus were successful on February 21, and 25, and March 2, at DSS 14, DSS 13, and DSS 24
- Nine GSSR observations of 1998 SF36, the MUSES-C Mission target, have been scheduled. Thanks to all the users who gave up time for these critical observations, including Galileo, GBRA, Maintenance, NCT, PN10, SVLB, and VGR1

NEAR



Mission Operations

DSN Scheduling
March 15, 2000

Joint Users Resource Allocation Planning Committee

J. Miller for G. Moore
gary.moore@jhuapl.edu
(240)228-8352

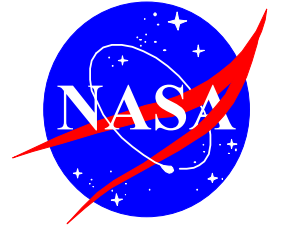


Johns Hopkins University Applied Physics Laboratory

<http://near.jhuapl.edu/>



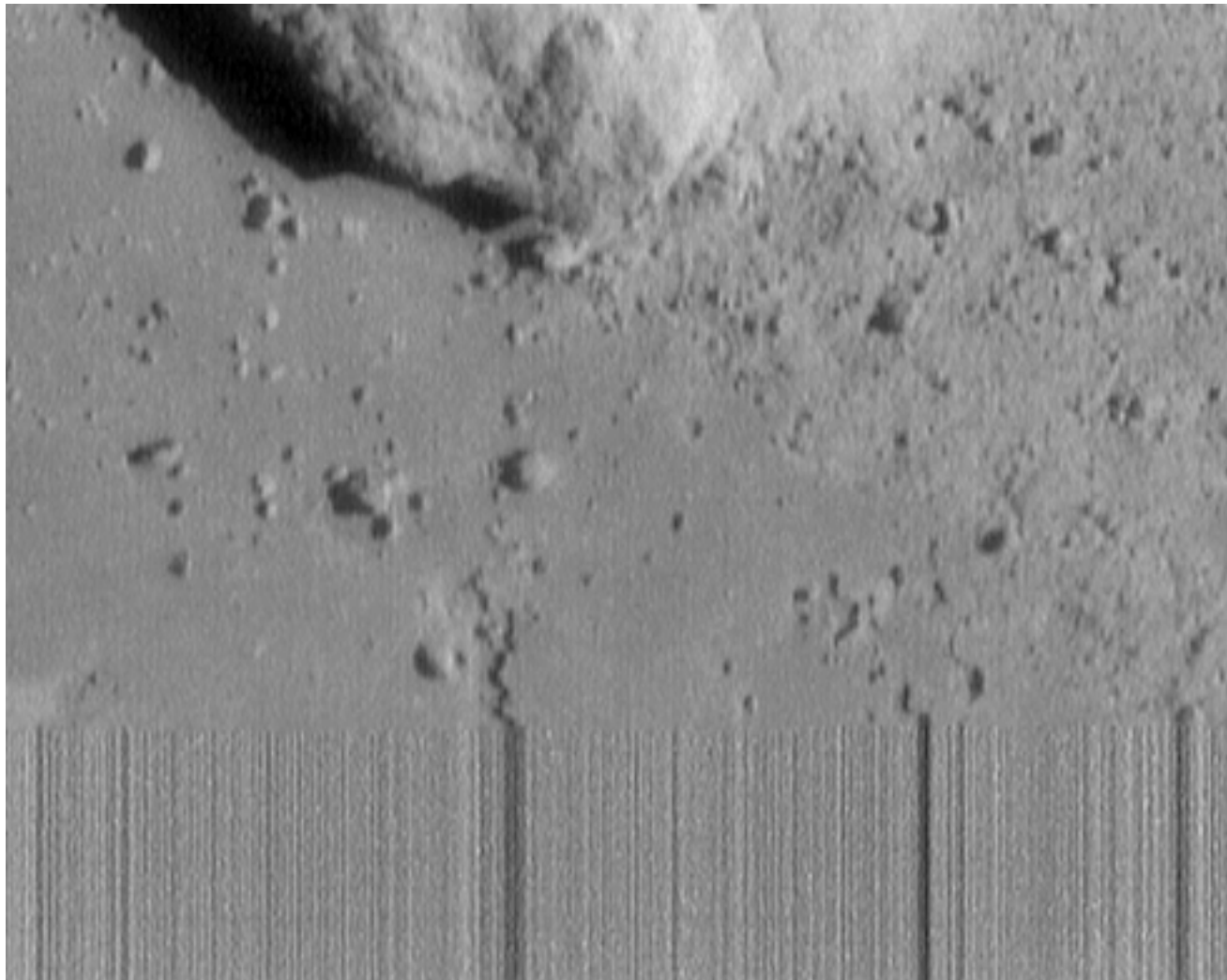
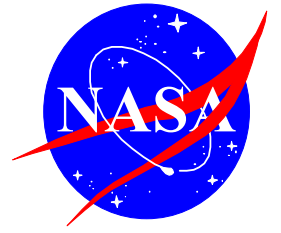
Near Earth Asteroid Rendezvous



- ***NEAR Mission is over!***
- **Spacecraft successfully landed on February 12th.**
- **Favorable conditions allowed instrument operations on surface.**
 - **DSN Support extended to 2/28/01.**
 - **Data successfully returned from gamma ray spectrometer and magnetometer.**
 - **Spacecraft reconfigured for hibernation on final track which ended at 0000.**
- **Not enough fuel to take off -- the NEAR spacecraft is now stranded on a lonely, hostile alien world facing a long, dark winter.**

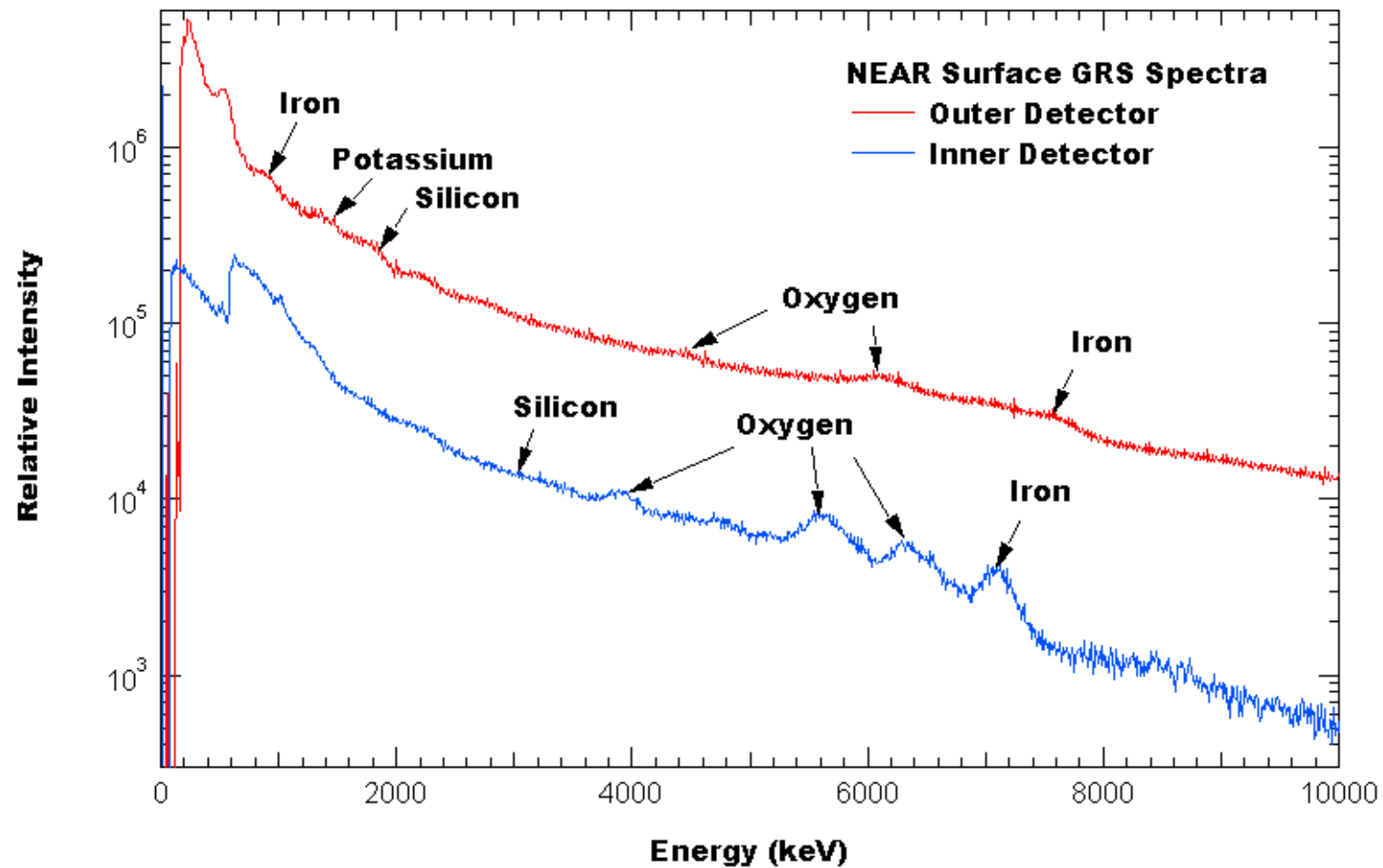
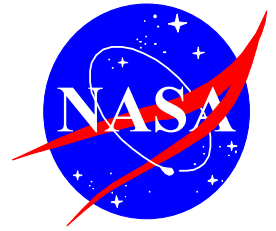


Near Earth Asteroid Rendezvous



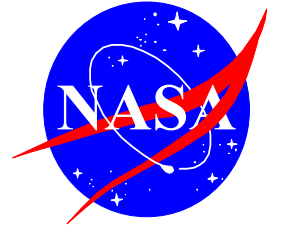


Near Earth Asteroid Rendezvous





Near Earth Asteroid Rendezvous




THANKS, EVERYBODY!

- IT'S BEEN NICE WORKING
WITH YOU



WELCOME

STARDUST Project



***JOINT USERS
RESOURCE ALLOCATION
PLANNING COMMITTEE***

***R. E. Ryan
March 15, 2001***

NASA Jet Propulsion Laboratory

<http://stardust.jpl.nasa.gov>



STARDUST

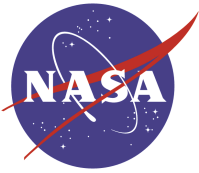
Report to JURAP



STATUS

- **SPACECRAFT IS HEALTHY (3/15/01)**
- **PRESENTLY 0.23 AU from EARTH**
 - **00:03:45 RTLT**
 - **1.2 AU from SUN**
- **CIDA (Dust Analyzer) Instrument re-calibrated post -EGA**
- **NAV CAM (Camera) calibration activity still on-going**
 - **SOME ADDITIONAL (or re-deposit of) CONTAMINATION ON THE CAMERA OPTICS**
 - **ADDITIONAL HEATING CYCLES PROPOSED**





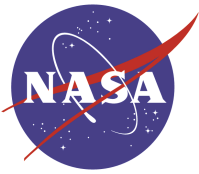
STARDUST

Report to JURAP



- **EGA Mission phase successfully completed**
 - Lunar images worked very well for pointing and resolution
 - Pre-EGA targeting so close that the cleanup maneuver TCM-6 was cancelled (scheduled for February 14)
 - Delta V required was only 0.27 m/s
 - Canceling it will cost 0.5 m/s at DSM-3
 - EGA targeting was practice for Earth Return in '06
- **TMOD SUPPORT HAS BEEN VERY GOOD**
 - Have used (demonstrated) X-Band uplink cmd at DSS 43





STARDUST

Report to JURAP



CHECK OUT THE HOMEPAGE

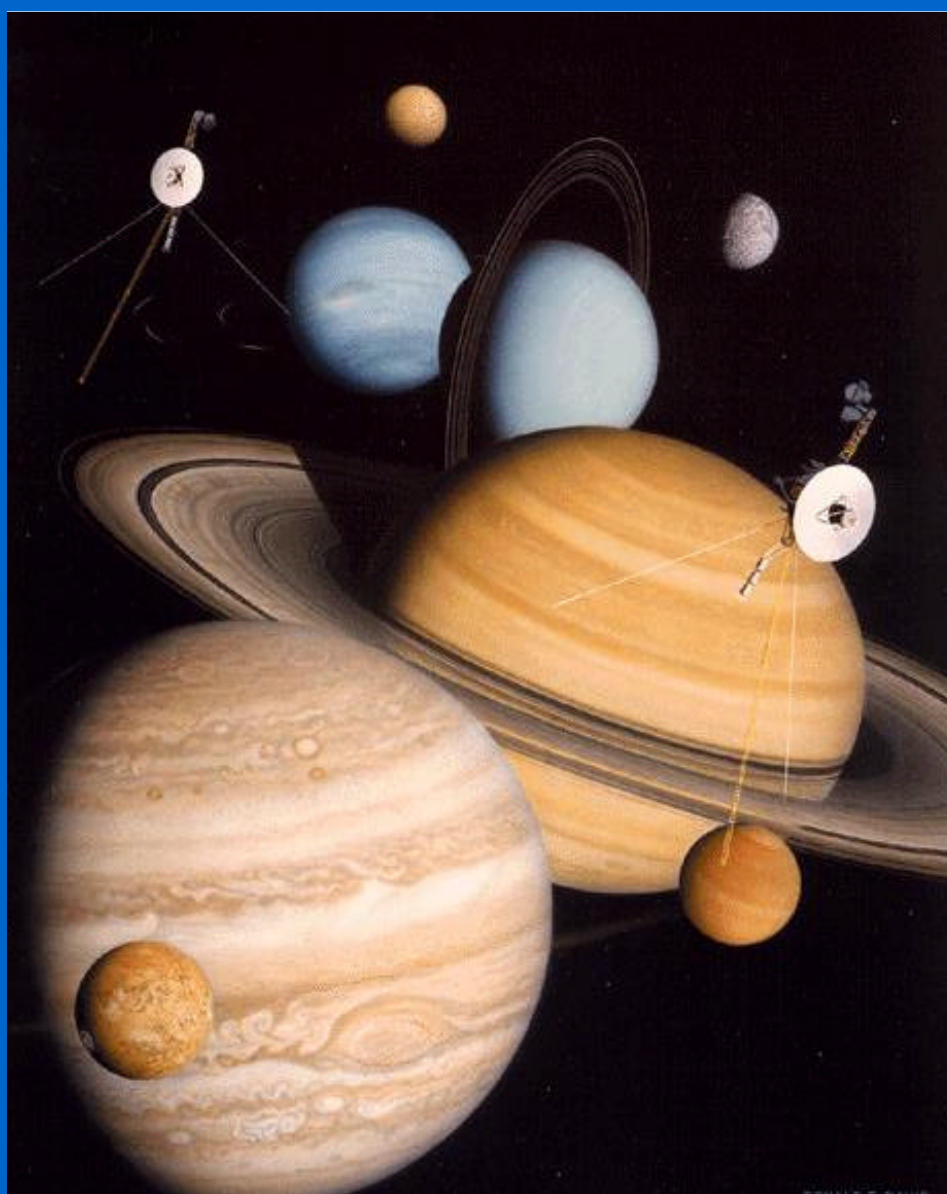
<http://stardust.jpl.nasa.gov>

UPCOMING EVENTS

CIDA Interstellar Collection Period #2 (3/16 to 8/8/01)

DSM-2 (TCM-7) March 13, 2002





*JOINT USERS
RESOURCE ALLOCATION
PLANNING COMMITTEE*

VOYAGER

FLIGHT OPERATIONS



**J. C. Hall, Jr.
March 15, 2001**

NASA Jet Propulsion Laboratory

<http://vraptor.jpl.nasa.gov>



VOYAGER

FLIGHT OPERATIONS



FLIGHT SYSTEM STATUS

MISSION STATUS

VOYAGER 1

- * HELIOCENTRIC DISTANCE – 80.4 AU, RTLT – 22h16m14s
- SPACECRAFT REMAINS HEALTHY
- MAJOR ACTIVITY - DTR PLAYBACK, MAGROL
- RTLT = 24h00m00s in 2002-280/06:57:54 (10/7/02)

VOYAGER 2

- * HELIOCENTRIC DISTANCE – 63.4 AU, RTLT – 17h42m16s
- SPACECRAFT REMAINS HEALTHY
- MAJOR ACTIVITY - DTR PLAYBACK, ASCAL, MAGROL



VOYAGER

FLIGHT OPERATIONS



GROUND SYSTEM STATUS

(January 13, 2000 - March 9, 2001)

DSN - OVERALL SUPPORT – GOOD

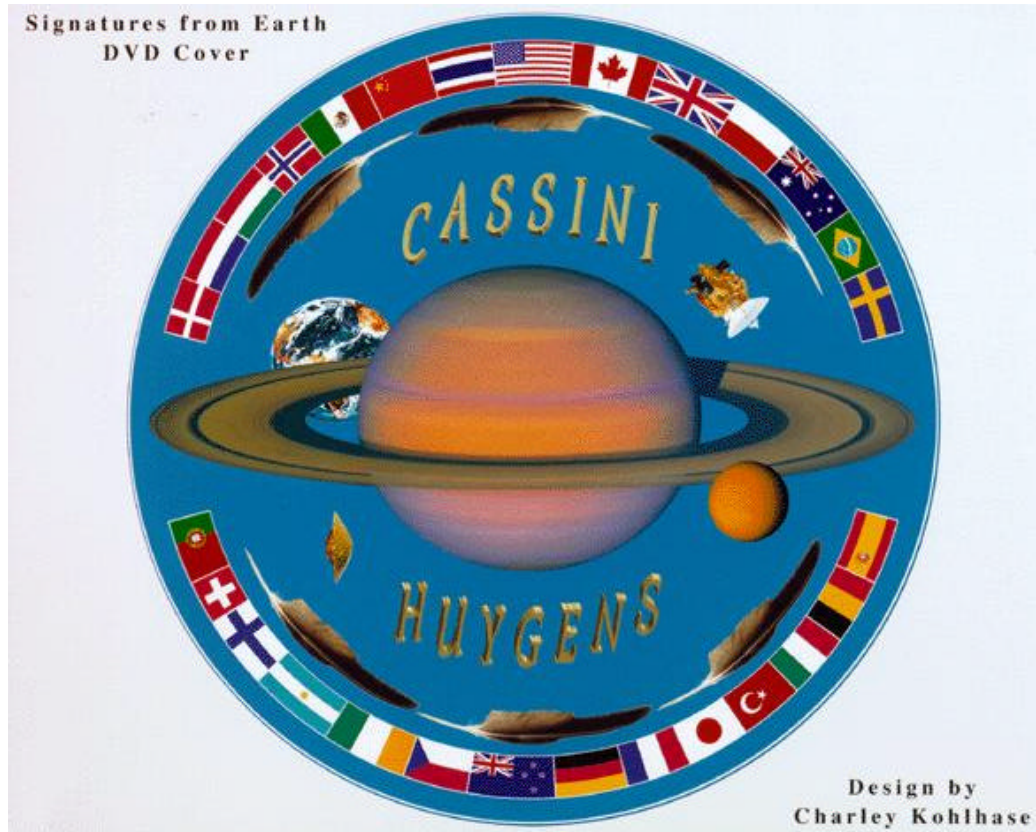
TOTAL SUPPORT TIME, OUTAGE TIME, % of OUTAGE TIME

S/C	SCHED SUPPORT	ACTUAL SUPPORT	70M TIME	SIGNIFICANT OUTAGE TIME	% of OUTAGE TIME
31	723.7	721.0*	344.4	25.6 (3.3)	3.99
32	522.0	516.1**	92.0	3.5 (1.6)	0.98

*DSN support released in support of SOHO emergency, STARDUST (2), transmitter maintenance at DSS-15, and NEAR.

**DSN support released in support of coverage negotiations with GEOTAIL and SOHO, Ulysses, MGS, and EUTELSAT launch.

VOYAGER HOMEPAGE - <http://vraptor.jpl.nasa.gov>



Cassini

<http://www.jpl.nasa.gov/cassini/>

Joint Users Resource Allocation Planning (JURAP) Committee Meeting

Dave Doody
March 15, 2001

NASA Jet Propulsion Laboratory



Cassini



- Jupiter Science Wrapping Up
 - <http://jpl.nasa.gov/jupiterflyby>
 - Jupiter Science Template Observations continue through 2001 DOY 081.
- Operations Basically Nominal
 - Minor instrument anomalies being worked and recovered near real time
 - Reaction Wheel Anomaly: Long Term Approach being defined; generally...
 - Minimize RWA use during cruise, using thrusters instead
 - Use RWA for GWE and other infrequent science observations
 - Resume RWA use during Saturn Approach Science subphase (/TBD)
 - Huygens Probe link resolution in work, DSN tests DOY 031-036 went well.
 - Excellent DSN support despite ongoing 1-Way Doppler problem
- Radio Science Link Tests March & April 2001
- Gravitational Wave Tests May & August 2001
- Gravitational Wave Experiment Nov 26 — Dec 4, 2001

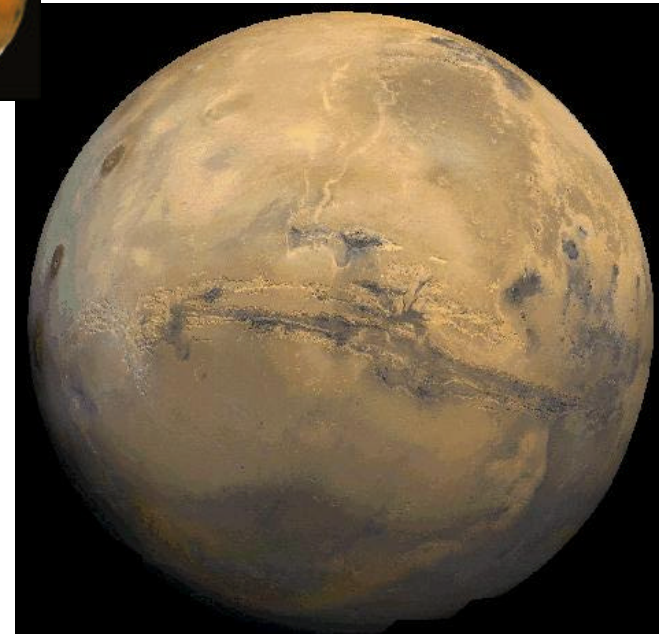
MGS Flight Operations



Presentation to the
**Joint Users Resource Allocation
Planning (JURAP) Meeting**

March 15, 2001

E. E. Brower



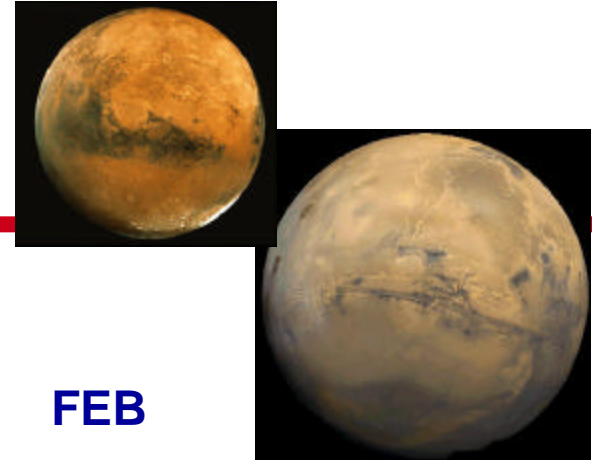
<http://mars.jpl.nasa.gov/missions/present/globalsurveyor.html>

AGENDA



- **Color Status**
- **Recent Events**
- **Reaction Wheel Failure**
- **Upcoming Events**
- **ROTO Image**
- **Issues**

COLOR STATUS



	DEC	JAN	FEB
•FLIGHT OPERATIONS			
–SPACECRAFT	G	G	G
–NAVIGATION	G	G	G
–MISSION PLAN/SEQUENCE	G	G	G
•SCIENCE	G	G	G
•FLIGHT SUPPORT			
–GROUND DATA SYSTEM	G	G	G

RECENT EVENTS



- Began Beta-supplement operations
- Completed 1 year of mapping
- 2nd mapping archive delivery (25,000 images)
- Solar conjunction
- Extended Mission full authorization
- First year mapping archive completed (55,000 images)
- Extended Mission Target ORT
- Campaign F (TES/RS coincident atm. obs.)
- RS egress occultation maneuvers
- MOLA polar scan
- DDOR observations
- EOPM
- ROTO demonstration
- MER SITE imaging begins

FEB 7, 2000

MAR 9

MAY 22

JUNE 25-JULY 9

OCT 16

OCT 31

DEC 4-5

DEC 9-DEC 21

DEC 20, JAN 10,
JAN 18

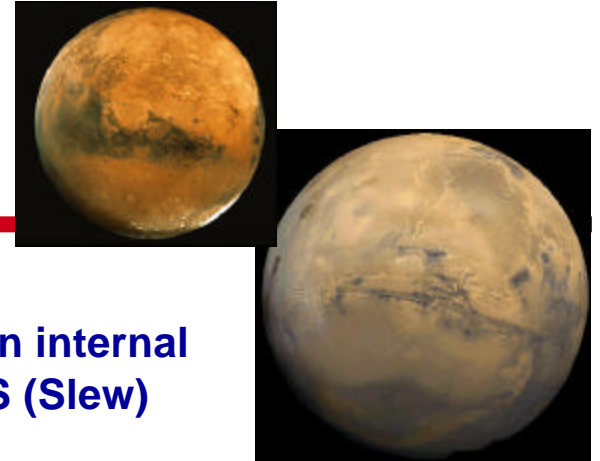
JAN 9, 13, 24, 27

JAN 31 (PST)

FEB 16

FEB 19

REACTION WHEEL FAILURE



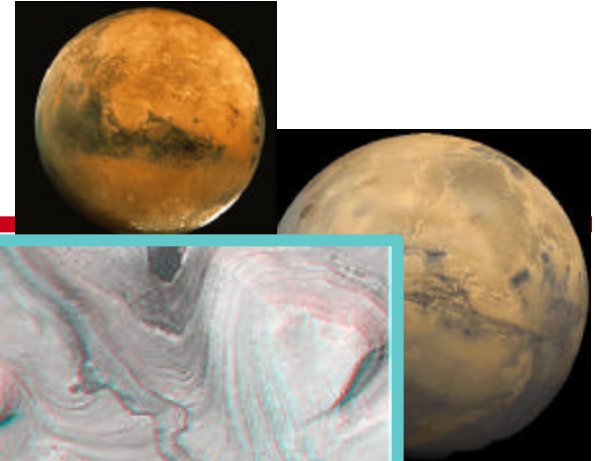
- **X Reaction Wheel failed Jan. 18, Suspected cause is an internal circuit failure cause fuses to blow. Spacecraft to use S (Slew) Reaction Wheel remainder of the Mission**
- **X axis reaction wheel Peer Review held Feb. 6 , report distributed**
- **Project intends to complete Extended Mission Objectives using S-wheel (YZS) spacecraft attitude control**
 - **Proceed as long as viable backup configuration exists (other than safe mode)**
- **Four actions:**
 - **Continue fault investigation (source identification, implications)**
 - **Review fault response to another wheel failure**
 - **Thruster use, software patches, Redman changes, delta V forecast, priority changes, e.g. MER UHF relay support**
 - **Proceed with Extended Mission Objectives**
 - **ROTO demonstration, Redman changes, software patches**
 - **Look at operational approaches to further minimize risk**
 - **Wheel stress, fuse fatigue, SA start/stop vs. autotrack**

UPCOMING EVENTS



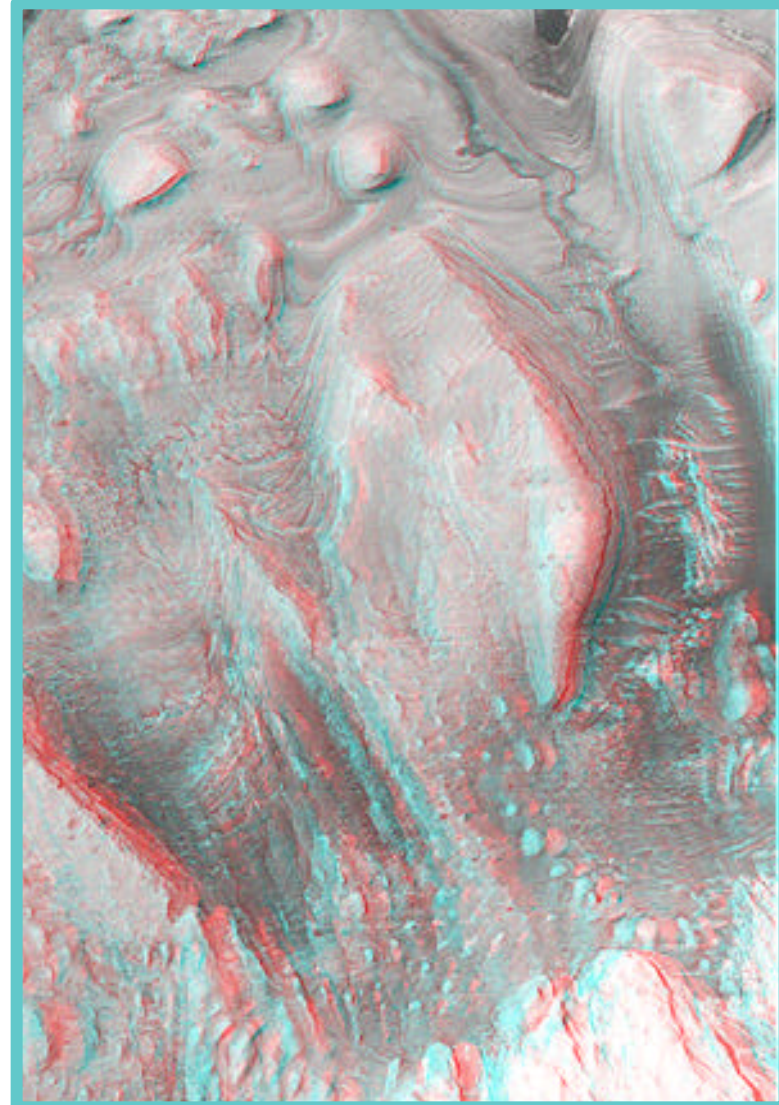
- | | |
|--|--------------|
| • Planetary quarantine study complete | APR |
| • 18 month archive complete | APR 30 |
| • Thruster/fuel strategy review | MAY 1 |
| • UHF Test (tbs) | JUN |
| • 2nd Extension proposal | JUN 15 |
| • Beta supplement ends | JUN 22 |
| • NASA approval Extended Extended Mission | OCT 1 |
| • Second year mapping archive complete | OCT 30 |
| • Selection of Extended Extended mission plan | JAN 30, 2002 |
| • End of extended mission | APR 22 |
| • Begin relay storage (option 1) | MAR 2003 |
| • MER EDL | JAN-FEB 2004 |
| • End of E2 Extended Extended operations (tbd) | JUN 2004 |

ROTO DEMO IMAGE



This image is an example of the MGS ROTO capabilities. This is an image taken during the MGS ROTO demo support.

(3D Glasses are required to view)



UNCERTAINTIES



MGS is unable to submit firm requests for future DSN Coverage requirements at due to the uncertainties of pending requirements from the Mars 2001 Odyssey Spacecraft to support aero-braking and MER spacecraft to support EDL. An ongoing effort continues to firm up these requirements so MGS can submit the best information at the earliest point in the process as possible.

The top banner of the slide features a composite image. On the left, a vertical strip shows a close-up of the Sun's fiery surface. The main part of the banner shows the Ulysses spacecraft in orbit around the Sun, which is depicted as a large, glowing orange and yellow sphere. The word "ulysses" is written in a stylized, yellow, serif font across the right side of the banner.

ulysses

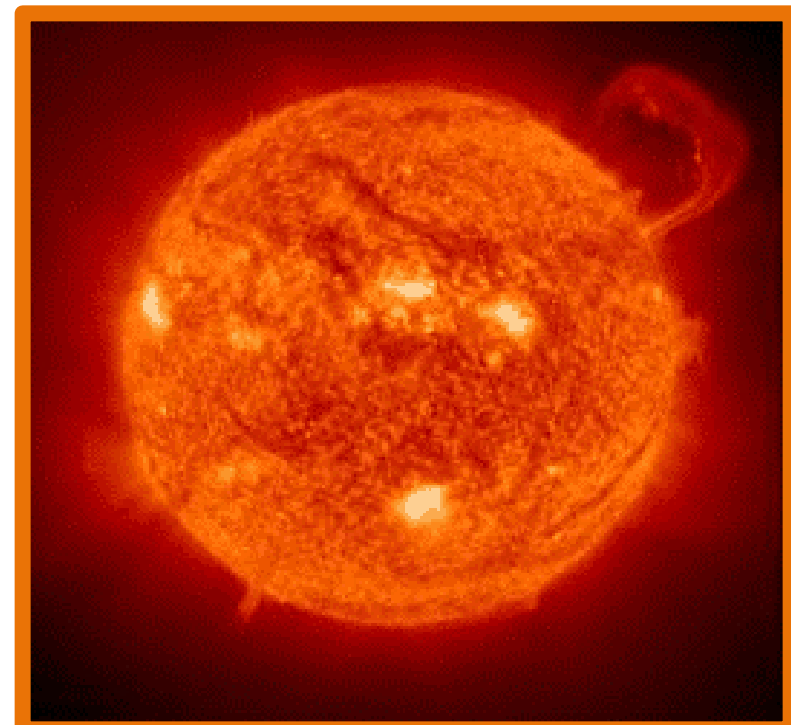
JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

I. J. Webb

March 15, 2001

NASA Jet Propulsion Laboratory

<http://ulysses.jpl.nasa.gov/>





ULYSSES

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

- Spacecraft operations are normal. The spacecraft is in it's second orbit around the sun and is currently in nutation operations. Instrument calibrations and reconfigurations are performed as required.
- DOY 051 - DSS 34. CPA Failed with verification errors, went from IDLE2 mode to CAL2 mode. Configured another CPA and went from CAL2 mode to IDLE2 mode while CONSCAN was enabled on the spacecraft. This caused erratic maneuver performance and caused nutation to increase from .05 degrees to .2 degrees.
- DOY 058 – An open loop “MACELRATH” maneuver was successfully employed in response to high nutation levels (1.2 degrees) following the kourou support.
- DOY 062 – DSS 24 TGC would not acquire 2048 BPS. Predicts would not execute, swapped to manual mode to acquire. 37 minutes of lost telemetry.



International Solar Terrestrial Physics

exploring the Sun-Earth connection

ISTP

Monthly Spacecraft Status Report to:

Joint Users Resource Allocation
Planning Committee (JURAP)

Albert Chang

March 15, 2001

NASA / Jet Propulsion Laboratory

www-istp.gsfc.nasa.gov/istp/



International Solar Terrestrial Physics

exploring the Sun-Earth connection



ISTP

MONTHLY SPACECRAFT & PAYLOAD STATUS FOR ACE, IMAGE, POLAR, SOHO AND WIND

- ACE spacecraft and subsystems are operating nominally. Nine DSN discrepancies were noted over the past two months. Normal attitude maneuvers have been successful every week or so. Command testing for the 34M system has been successful.
- IMAGE is operating nominally. DSN performance has been OK this last month, except for a lot of I-channel dropouts in February. Cause under investigation. We switched to the UPL command system on 1/30/2001. We had 2 blown passes, one due to a H/W failure at DS-24. The other due to a TBD failure of the commanding system. No data was lost because of these anomalies.



- POLAR is in nominal operations. The POLAR flip is scheduled for March 23rd - 25th and much more critical is the spacecraft reconfiguration scheduled for March 27th. This critical spacecraft reconfiguration is to switch from GTM-1 to GTM-2. If a problem occurs during this reconfiguration, it is possible that a spacecraft emergency could be declared. In addition, if a problem with the GTM occurs, then the spacecraft may be in engineering format. Consequently, the project requests that a spectrum analyzer be used during the switch and monitored for any changes in the telemetry. There have been a number of DSN anomalies which will be on a following chart. Command testing for the 34M system has been successful.
- SOHO is in continuous (best effort) operations at present and is operating normally. The maneuver last month was successful. The DSN anomaly chart is included for January and February. Command testing for the 34M system has been successful.



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ISTP

- WIND has been operating nominally. Spacecraft maneuver was successful last month. Another maneuver will be in April. Command testing for the 34M has been successful. DRs for February are higher than other months.



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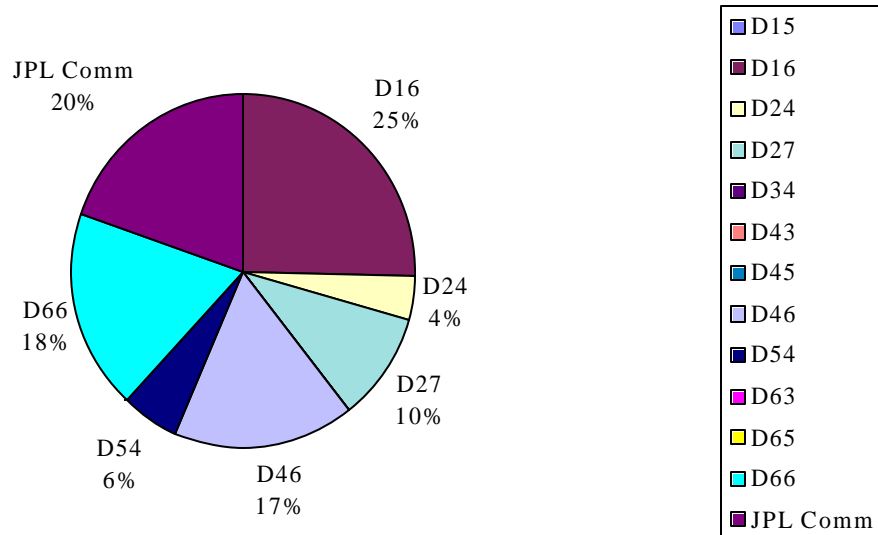


ISTP

SOHO DSN ANOMALY COUNT THIS YEAR

D15	D16	D24	D27	D34	D43	D45	D46	D54	D63	D65	D66	JPL Comm	
0	18	3	7	0	0	0	12	4	0	0	13	14	71

DSN Anomalies 1 Jan 01 - 4 Mar 01





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ISTP

WIND/POLAR Discrepancies January and February

WIND

	D16	D24	D27	D34			D46	D54			D66	JPL Comm	Total
	0	2	0	4			1	2			0	0	9

POLAR

	D16	D24	D27	D34			D46	D54			D66	JPL Comm	Total
	3	4	2	0			0	6			13	0	28



ISSUES

- **CAST TOOL - FOR 22 MONTHS (AND CONTINUING TO COUNT) GSFC HAS ATTEMPTED TO PUT THE JPL CAST TOOL IN THE HANDS OF OUR SCHEDULERS IN ORDER TO IMPROVE CONFLICT RESOLUTION EFFICIENCY.**
 - We are still not using the tool yet, and have not received the training for our DSN schedulers!!!
- **Serious problems with the overseas real time telemetry data line. JPL has been working the problem but all of our missions have had degraded data for the past two weeks.**
- **Overall, February has been a rough month for both the DSN and GSFC.**



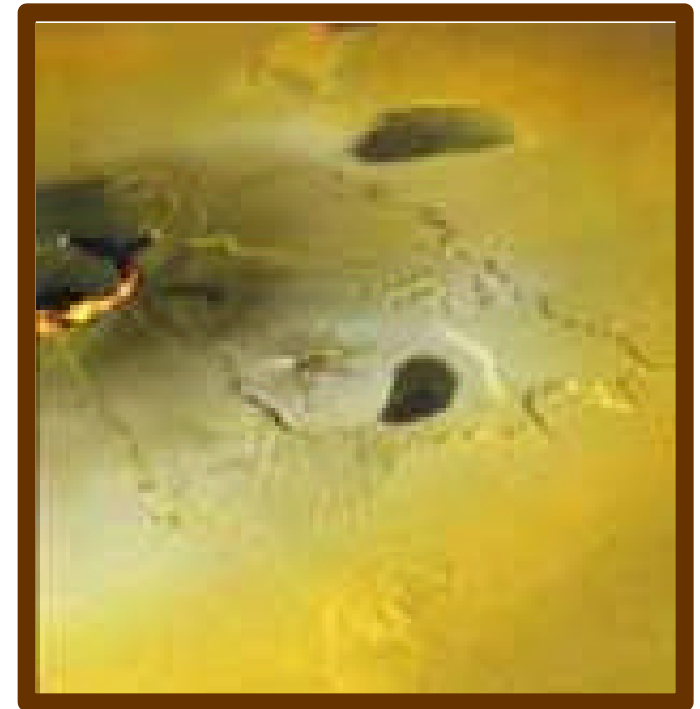
GALILEO MILLENNIUM MISSION

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

***Brad Compton
March 15, 2001***

NASA Jet Propulsion Laboratory

<http://galileo.jpl.nasa.gov/>



Ongoing Volcanic Eruption at Tvashtar Catena, I
on Jupiter's Moon IO



GALILEO MILLENIUM MISSION

SIGNIFICANT EVENTS

- **Successfully completed real time science buffer dump to tape strategy**
- **Initiated Ganymede 29 encounter data playback**

PROJECT PLANS

- **Complete Ganymede 29 playback**
- **Next encounter Callisto 30 (25 May)**